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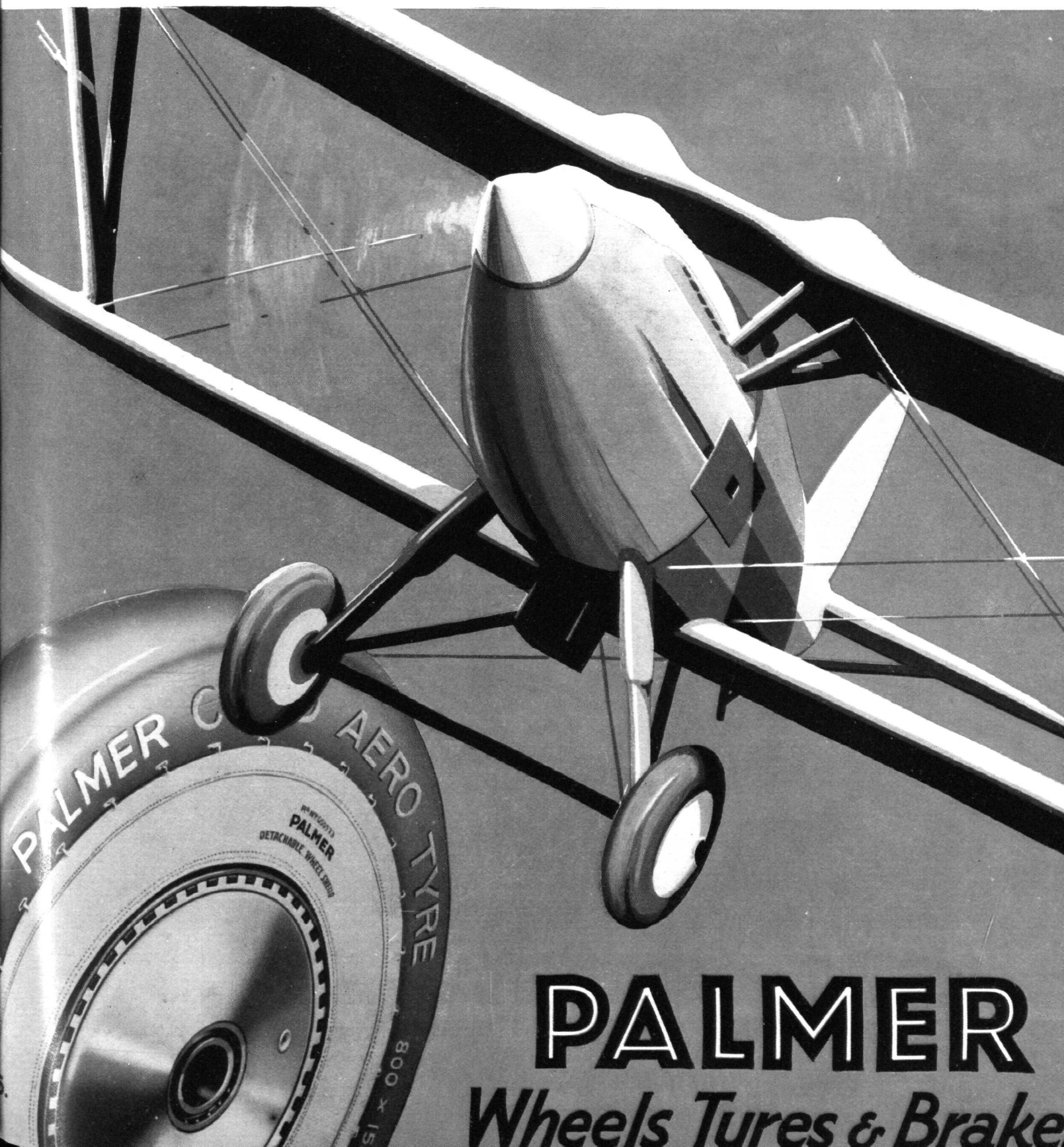
FLIGHT

The
AIRCRAFT ENGINEER
AND AIRSHIPS

OFFICIAL ORGAN OF THE ROYAL AERO CLUB

No. 1290
Vol. XXV
No. 37

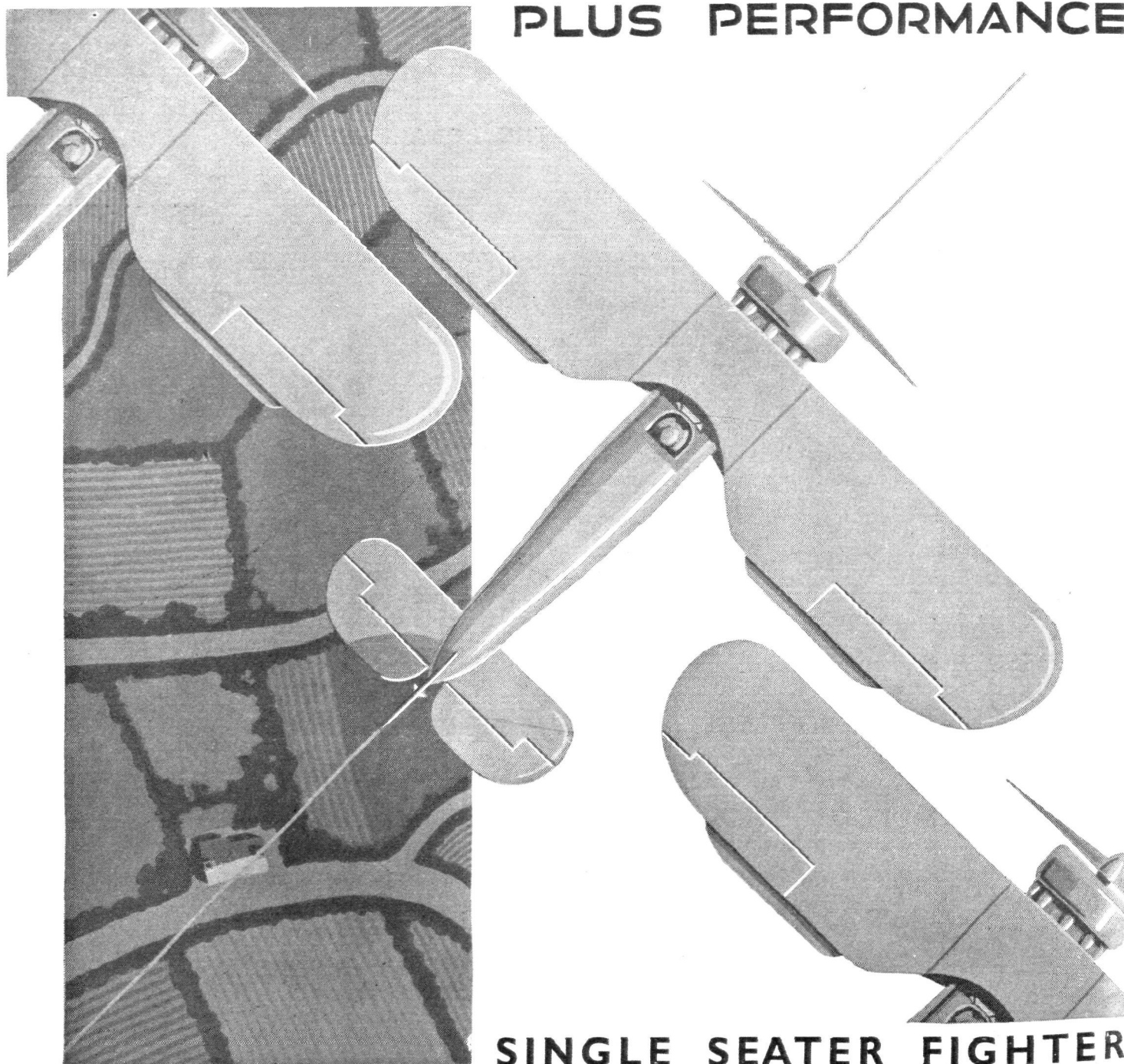
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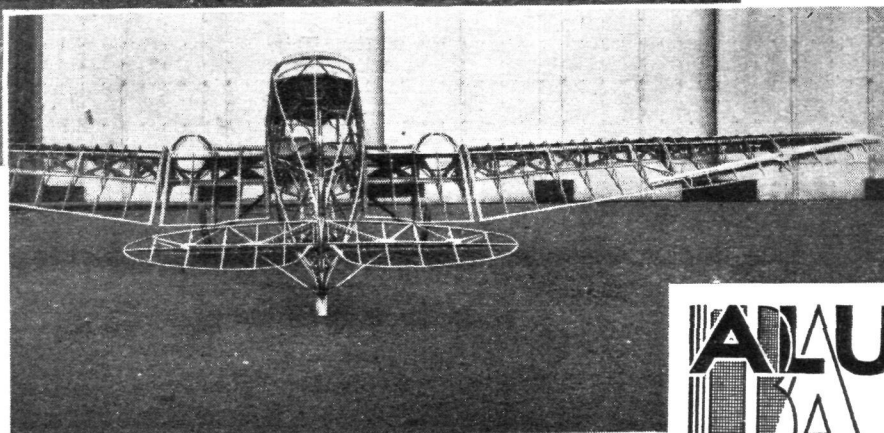
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First Aeronautical Weekly in the World. Founded January, 1909

Founder and Editor: STANLEY SPOONER

A Journal devoted to the Interests, Practice and Progress of Aerial Locomotion and Transport

OFFICIAL ORGAN OF THE ROYAL AERO CLUB OF THE UNITED KINGDOM

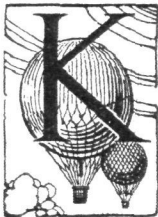
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EDITORIAL COMMENT



ING FAISAL'S death will be mourned by all admirers of a brave and able Arab Prince, and in particular by all who are interested in air power. The recent history of Iraq has been mainly a history of air power, and the death of the King who has ably guided the fortunes of his country in these recent years must inevitably raise queries as to the future position of the Royal Air Force in Iraq.

Faisal was the third son of Hussain, hereditary Sherif of Mecca and afterwards King of the Hedjaz for a short time. In the Arab revolt against Turkish domination during the great war, Faisal was the chief leader and the inspiring genius of the Arabs. It was he who drew the various rival tribes together and led them as a national Arabian army. In many a desert battle he displayed the greatest personal bravery and the most resolute leadership. Then, after various adventures, he was elected King of Iraq, though the country was still under a British mandate. It was a difficult position for him. Apart from the Kurds and the Assyrians, the people of Iraq are mainly Arabs, but Islam is divided into two great religious sects. In Arabia the people belong to the Sunni sect, while the Persians and Iraqis belong to the Shiah sect. It was doubtful whether a Sunni king would ever gain a great hold over a Shiah population, even though the said king belonged to the senior family of the descendants of the Prophet. Despite his election, King Faisal's position rested chiefly in those early days on the support of the British, exerted through the Royal Air Force. Yet, if he was ever to win the hearts of his people, it was necessary that Faisal should become a patriotic Iraqi, and not the mere puppet of the foreign mandatory Power. Between his Shiah subjects and his British supporters, the new King had to play a very tactful game, and he played it with consummate skill. In addition to the difficulties mentioned, an ambitious and able man like Faisal would naturally resent a position of tutelage. He wished, and rightly wished, to be the real ruler of

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DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list :—

- 1933.
- Sept. 16. Bristol and Wessex Ae.C. Garden Party.
- Sept. 17-24. " la Bienvenue Aerienne " at Rheims.
- Sept. 23. Dinner and Dance, London Aeroplane Club, Hatfield.
- Sept. 24. " Air Survey Work." Lecture by Maj. H. Hemming, at Wills Hall, Bristol.
- Sept. 29. Stage and Screen Ae.C. Gymkhana and Theatrical Garden Party, Hatfield.
- Oct. 7-8. B.G.A. Gliding and Soaring Competition.
- Oct. 12. " Air Traffic Control." Lecture by Maj. R. H. S. Mealing before R.Ae.S.
- Nov. 2. " Variable-Pitch Airscrew and Variable Gears." Lecture by W. G. Jennings before R.Ae.S.
- Nov. 16. " Stiffness of Aeroplane Wings." Lecture by H. Roxbee Cox before R.Ae.S.
- Nov. 25. Comrades of the R.A.F. Reunion Dinner, at Thames House Restaurant, Millbank, S.W.1.
- Nov. 30. " Tail Buffeting." Lecture by W. J. Duncan before R.Ae.S.
- Dec. 7. " Possible Future Development of Aircraft Engines." Lecture by A. H. R. Fedden before R.Ae.S.
- Dec. 8. Calshot Reunion Dinner, at R.A.F. Club, Piccadilly, W.1.
- Dec. 14. " Light Alloys for Aeronautical Purposes." Lecture by L. Aitchison before R.Ae.S.
- Dec. 15. Close of entries for International Touring Competition (1934), Poland.
- Dec. 18-24. International Rally at Cairo and Meeting of the F.A.I.
- 1934.
- Jan. 11. " Testing of Aircraft Landing Mechanisms and Some Factors Affecting Design." Lecture by W. D. Douglas before R.Ae.S.

the country. In the end he achieved his objects. He won the love of his Shiah subjects, and he remained a good friend of the British who had placed him on the throne. The mandate has been resigned, and Iraq has become a member of the League of Nations. A treaty has been signed with Great Britain which satisfies all except the extreme nationalist party in Iraq. The Royal Air Force remains in Iraq, but its chief station is to be removed from Hinaidi, outside Baghdad, to a new location on the Euphrates river. There it will be less in the public eye. It will not be a constant reminder that the forces of Iraq are not yet able to secure the integrity of the frontiers and internal peace. At the same time, the personnel of the Royal Air Force will be in better harbourage than they have been at Hinaidi.

The new King Ghazi is only 21. Naturally, he is inexperienced, and has not yet been able to show what stuff is in him. Still, an Oriental comes of age at 18, so that at 21 a man is more than a mere stripling. King Ghazi is an old Harrovian, so that he already has close ties with Great Britain. It is said that his greatest ambition hitherto has been to enter Cranwell as a Flight Cadet. If that is true, it is very satisfactory. The new King will be a good friend to aircraft and air power. This is of good augury, not only for the cause of flying in general, but for the best interests of Iraq. It has been proved beyond all doubt that in a desert country air power is the cheapest and also the most efficient way of keeping order. That may not be so in a mountainous country, where the best rôle of aircraft may well be co-operation with an army, but, so far as desert countries go, the case for air control needs no further demonstration. All rulers, whether Kings, Dictators, or mere Premiers, who recognise facts like this, are assets to the present and the future.

At the same time, British patriotism and pride in the record of the Royal Air Force in Iraq does not compel us to insist, or even to hope, that our squadrons must stay in that country for ever. We can heartily sympathise with the ambition of the Iraqis to undertake fully the defence of their own country as well as its internal administration. They are a virile race, and no race of men worthy of the name like to think that they cannot defend their country with their own strong right arms. It will certainly be part of King Ghazi's business to build up by degrees an efficient army and an efficient air force. At present there is a flying corps which is part of the Iraqi Army. It is small, and its equipment is modest, but the officers have mostly been trained by the British Royal Air Force, and have passed out as very competent pilots. Great developments are sure to come, and some day no doubt the Iraqi Air Force will be able to take over full responsibility for the control of their own land. Then, no doubt, the British squadrons will be withdrawn. We have need of more squadrons elsewhere, and this reinforcement of our air strength in the British Empire proper will be very welcome. At the same time we shall feel great gratification when our pupils show proof of the competency of our instruction. Gratitude is not to be expected between one nation and another, and those who say that they expect it are only looking for disappointment. Friendship is

another thing. Iraqi pilots, who have been attached to British squadrons and have lived in the officers' messes, have made friends among their British mess-mates. They will pass on that tradition of friendship to their juniors in the Iraqi Air Force, and when the time comes for our squadrons to leave Iraq, we may hope with good reason that the friendship between the two nations of airmen will remain unbroken.

❖ ❖ ❖ ❖

It is reported that Wing Commander Wackett has designed a new type of aeroplane for Sir Charles Kingsford Smith, to be called the "Codock," of which some account is given on another page. It is

**Singapore-
Australia
Tenderers**

also stated that this machine is to be the basis of a tender by Sir Charles for the contract for the air service between Singapore and Australia. This is interesting, though it does nothing to make clearer a position which is not as lucid as it might be, and which seems to be constantly changing. Sir Charles and Mr. Ulm were recently the two managing directors of Australian National Airways, Ltd., which has now gone into liquidation and sold up its Avro 10 machines. Mr. Ulm, one of the most astute men in the Australian flying movement, is now engaged in flying round the world, though one might have expected him to be waiting in Australia for the publication of the terms of the tender for the new service or services. It is not yet certain whether the contract will be for one through service from Singapore to a terminus somewhere in Australia, Canberra or Melbourne or elsewhere, or whether there will be one contract for the Singapore-Darwin section and another for the internal section. It is known that a new company is being registered in Australia in which the shares will be held jointly by Imperial Airways and Qantas, and that this company intends to tender for the contract or contracts. Now we hear that Sir Charles Kingsford Smith also intends to enter the field.

It is not in the least surprising that Sir Charles should wish to secure the contracts if he can. In its early days Australian National Airways put up a very good show, and for some time made profits out of an unsubsidised service between Brisbane and Sydney. It is generally understood, however, that this success was mainly due to the management of Mr. Ulm. Sir Charles is one of the finest long-distance pilots in the world, in fact Mr. Fokker in his book "Flying Dutchman" gives him first place among long-distance pilots. Presumably also he can raise sufficient financial backing to be able to carry out his contract if he secures it, though this is only a presumption on our part. We may also presume that he is not likely to tender on the basis of a certain type unless he is convinced that the type is a good one. He certainly ought to be a good judge. Still, Wing Commander Wackett has not always been a completely successful designer, and the Australian authorities know all about the history of his various designs. In any case a new type is always an unknown quantity, and a tender by Sir Charles on the basis of a new design by Wing Commander Wackett would surely look problematical to the Australian Government. It certainly could not carry the heavy guns, so to speak, of the "Atalanta" backed by Qantas and Imperial Airways.



AIR TRANSPORT

THE TATA AIR MAIL *An Unsubsidised Service in India*

“**I**N the name of the Empress! The overland mail.” Lovers of Rudyard Kipling will remember the poem in which he described the work of the Indian mail runner, a tough postman who takes the mail bags to places not reached by the railway. With his postbag slung over his shoulder and a spear hung with jangling bells in his hand, he trots untiringly along jungle paths, up mountains and down valleys. The bells are to scare wild beasts out of his way, while the spear is his only protection against man and beast. On very many occasions the said spear has proved but a broken reed, and each year official reports tell of mail runners who have fallen victims to tigers and sometimes to dacoits. There was, and still is, romance well worthy of Kipling’s pen in the work of the mail runner.

As yet no poet has sung the romance of the Indian air mail. In the land of contrasts, the mail pilot is the opposite number to the mail runner, and deserves at least equal honour. Tigers are not likely to worry him, nor dacoits, but there are devils in the air, and they much do congregate round the peaks of the Western Ghats in monsoon time. Even in the months of the glorious Indian winter, when all Nature smiles, there is romance in the thought that a letter can leave Karachi before dawn and reach Madras, 1,400 miles away, by 9.15 next morning. This, too, in a country where the mail runner still proudly plies his calling!

It was on October 15, 1932, not quite a year ago, that Mr. Vincent took a “Puss Moth” off from the aerodrome at Karachi and so opened the Tata service. It is a service for mails only, and passengers are not carried. Mr. Jehangir Tata, who has flown a “Moth” from India to England and is no ignoramus where aircraft are concerned, holds that passengers must be subordinated to mails and freight for some years to come. With mails, he says, almost the only consideration is speed, whereas in the case

of passengers, safety and personal comfort are of greater importance. Risks may be taken with mails which would not be permissible with passengers.

The service is also unsubsidised. A 10-year contract with the Government of India has been signed which provides for payment of a certain rate per lb. carried, according to the distance over which the mails are flown. The postal surcharge covers the rates payable to the Tata firm, and so the service costs nothing to the Indian taxpayer.

The service was started in October last year, so as to avoid having to tackle the Indian monsoon before experience of the route had been accumulated. The fine Indian winter lay ahead, followed by the baking summer, which is trying, but means perfect visibility. The South-West monsoon starts in June and lasts until about the end of September. During those months rain is almost incessant, and is very heavy. In parts of India it is not uncommon for eight inches of rain to fall in a day, and even heavier falls are known at times. When flying over the plains it is often possible to dodge the monsoon storms, but to get caught by one when crossing a mountain range would be a very unpleasant experience, unless the aeroplane were equipped with all the latest devices.

To appreciate fully the application of the monsoon to this route of the Tata Air Mail, it is useful to give some study to the map and contour maps which we publish with this article. The journey starts from Karachi, and the Tata service is scheduled to work in conjunction with the Imperial Airways service from Croydon to that port. The Imperial machine arrives on Friday afternoon. Mails for the South which are to go on by air are transferred to the Tata “Puss Moth,” which starts off about dawn on the Saturday morning. The first part of the trip, at least for eight months of the year, runs along the low-lying coast down to Bombay. There are no particular flying problems about this section of the route, and so we have not in-



KARACHI: An aerial view of the docks at Karachi, the Indian terminus of the Imperial Airways' eastern service, and the starting point of the Tata Air Mail. (Photo by courtesy of the High Commissioner for India.)



BOMBAY : An aerial photo of the Alexandria Docks. The headquarters of the Tata Air Mail are at Bombay. (Photo by courtesy of the High Commissioner for India.)

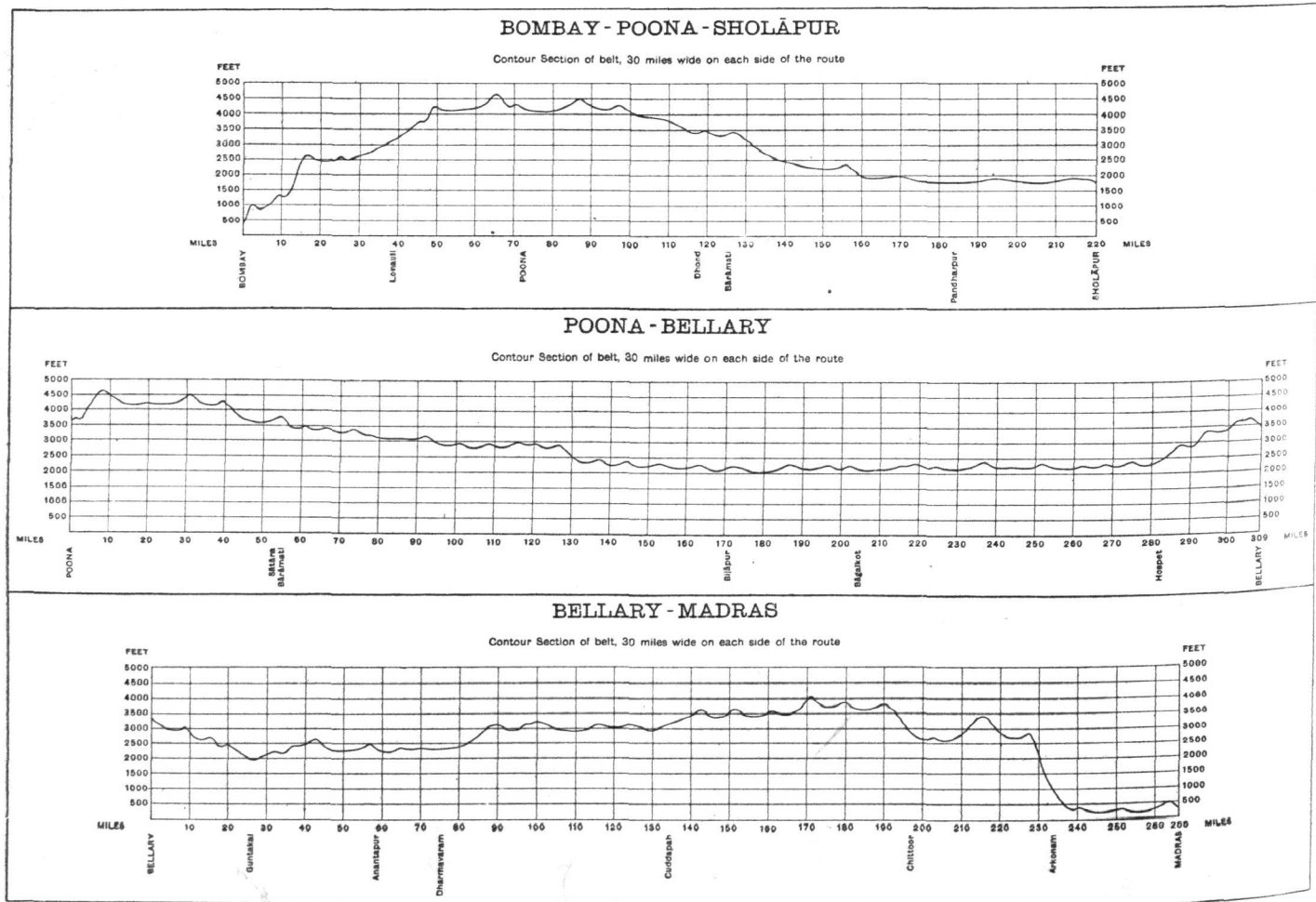
cluded it on our map. The "Puss Moth" lands at Juhu Aerodrome, Bombay, at 1.30 p.m., drops the Bombay mails, takes on other mails for the South, re-fuels, and starts off again. The Post Office delivers the letters in Bombay about 3.30 p.m.

Then the pilot is confronted with the steep wall of the Western Ghats. He is bound for Poona, the chief city of the Bombay Deccan. The contour map which we publish shows that the machine has to climb 4,000 ft. in 70 miles.

From Poona it descends again to the plains, and makes its way to Bellary, where it stops for the night, having covered 1,100 miles that day. Next morning it is off early again, and covers the remaining 266 miles in time to land at Madras by 9.15 a.m. on Sunday.

The return service starts from Madras at the latest possible moment on the Monday afternoon, and again the night is spent at Bellary. On the Tuesday the "Puss Moth" flies on to Bombay and Karachi, which it reaches before night, so that the mails can leave for England by the Imperial Airways' machine on the Wednesday morning. This programme was carried out from the start of the service until the break of the monsoon.

Then in June came the monsoon. Mr. Tata decided that he would not ask his pilots to fly over the Ghats in this season. Instead he moved his headquarters temporarily from Bombay to Poona. This called for an alternative and easier route, which is shown on our map. The machines coming southwards from Karachi turn eastwards about Surat, round the northern end of the Ghats by flying up the Tapti valley, and then turning southwards approach Poona from the north-east, thus avoiding the worst of the monsoon storms. The mails for Bombay are then put on the train, and arrive



CONTOUR MAPS OF SECTIONS OF THE TATA ROUTE : These show the heights which have to be negotiated by the Tata "Puss Moths."

PETER'S CHALLENGE TROPHY

(ROUND THE ISLE OF WIGHT AIR RACE)
6th SEPTEMBER, 1933.

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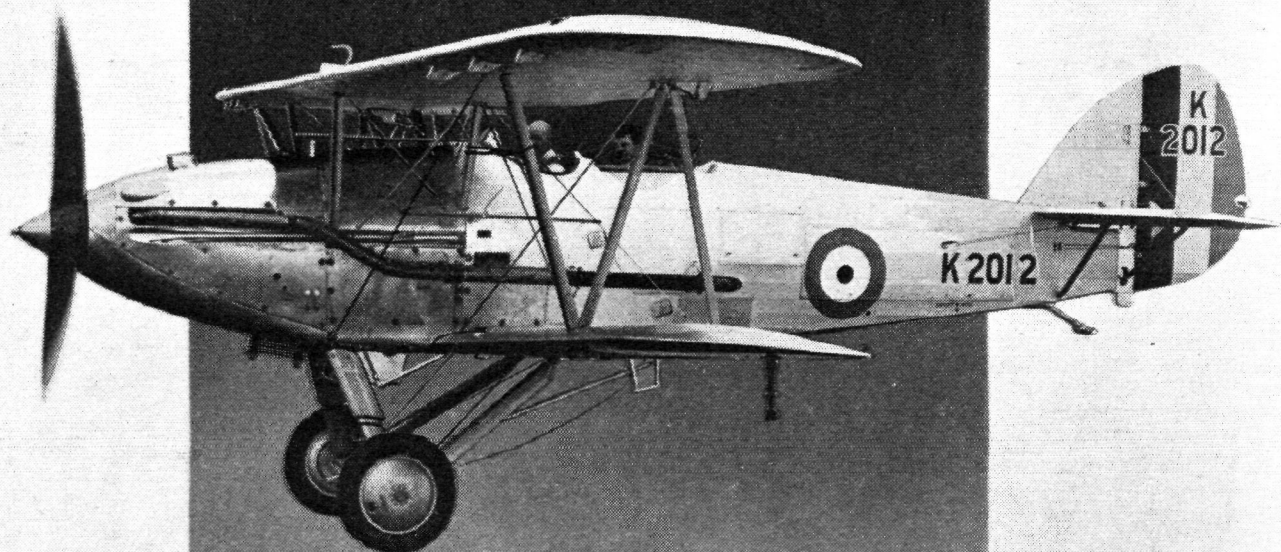
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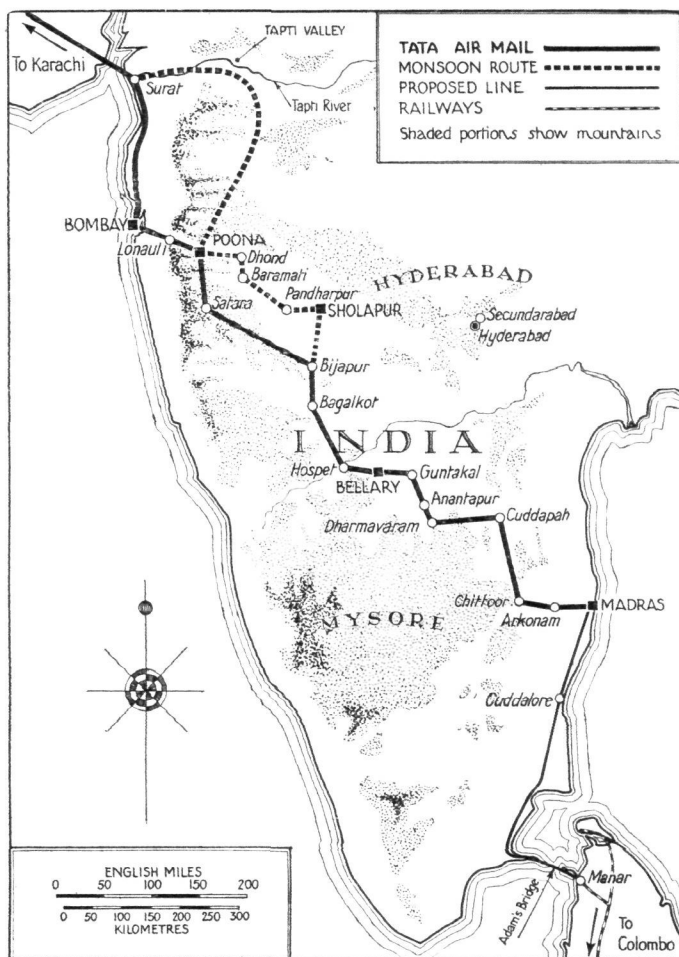
THE TATA AIR ROUTE : We have prepared this map to show the routes followed in normal times and also during the monsoon months.

in Bombay at 7.30 p.m. on the Saturday. The Post Office delivers them by the first post on the Sunday morning, which is not quite ideal. Mr. Tata hopes, however, before the monsoon breaks next year to have wireless equipment fitted to his aeroplanes, and so to be able to fly across the Ghats from Bombay to Poona. This would obviate another change of headquarters to the eastern side of the Ghats.

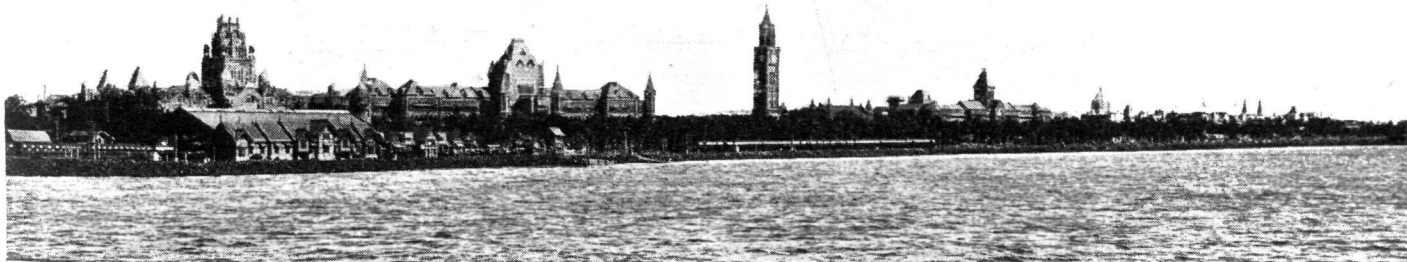
From Poona onwards to Bellary our map shows two alternative routes, one of which (through Sholapore) carefully avoids the hill ranges in that part of the country, while the other and more direct route crosses some of the smaller ranges. From Bellary on to Madras low-lying country is followed.

Before very long it is expected that the service will be extended from Madras on to Ceylon. The route will follow the low-lying coast down to Dhanushkhodi, and will cross the strait to Manaar, along the line of islands and rocks known as Adam's Bridge. Tradition and mythology have both been busy with this bridge. It gets its name from a tradition that Ceylon was the Garden of Eden (it seems to deserve this reputation) and that when Adam and Eve had to leave, Adam threw rocks into the sea to form a bridge to India. Hindu mythology says that when the hero Rama invaded Ceylon, he was assisted by the King of the Monkeys, Hanuman, and it was the latter who threw the huge rocks into the strait to make the bridge for Rama's army. The sea crossing here is about 21 miles, the same distance as between Dover and Calais, and at low tide landings would be possible on some of the islands. Even at high tide the water is shallow, and in an emergency a machine could land without being submerged. At Manaar the mails will be put on the night train and will be delivered in Colombo by the first post next morning, so that the absence of an aerodrome at Colombo causes no delay. It has been decided to make this crossing by landplane, as the present traffic would not justify the extra cost of seaplanes.

This is a very brief account of a really great air line



enterprise. Soon, perhaps, the route will be altered to include Hyderabad. Already, however, the Tata Air Mail is a credit to British India, and all British subjects may well feel proud of the enterprise of the great Parsi house of Tata.



BOMBAY : The fine prospect of Bombay which is familiar to all travellers to India. (Photo by courtesy of the High Commissioner for India.)

D.H.'s for Indian National Airways

It is stated that Airwork, Ltd., have received an order from Indian National Airways, Ltd., for their initial equipment of two de Havilland "Dragons" and one de Havilland "Fox Moth." "Gipsy Major" engines will be standard in each case, and the two "Dragon" aircraft will be fitted to take a Marconi A.D.6 wireless transmitter and receiver, together with Marconi-Robinson homing equipment. A single outfit has been ordered, which will thus be transferable at a few minutes' notice from one machine to the other. Both "Dragons" are to be fitted as alternative joy-riding and long-distance machines. In the former case they will carry eight passengers, and in the latter the addition of a removable lavatory and freight compartment will reduce the passenger capacity to five. This order has been placed with Airwork, Ltd., as the buying agents of Indian National Airways, the most recently-formed of their associated companies in the East, of which the two already in operation are Misr-Airwork in Cairo and Iraq Airwork in Baghdad. No definite statement may yet be made with regard to

the services for which these aircraft are required, but it is believed that a weekly service from Calcutta to Rangoon and a daily service from Calcutta to Dacca are contemplated, while other services are projected later in Northern India.

Air Postage to India

APROPOS our recent note on the postal charges on air mail letters to India, a correspondent complains to us that recently he sent a letter by air mail to an address in Bombay. He first put on the ordinary 6d. worth of stamps, and then, having consulted the paragraph in FLIGHT, he added 2d. for carriage by air from Karachi on to Bombay. Then, not being quite sure of the rules, he added one 1½d. as ordinary postage, though this was not necessary. He duly added a blue air mail label. Then he thought that he had taken all possible precautions to ensure the letter going by air all the way. In due course he heard from his Bombay correspondent that the letter had been sent by train from Karachi to Bombay, apparently because he had omitted to write on the envelope "By air in India." So the Postmaster-General pocketed

3½d. and did nothing for it. Surely it is time that the rules governing air postage were simplified. This sort of thing is not likely to make the air mail popular. Shall we have to come to air mail stamps after all?

Parcel Air Mail Service

THE Postmaster-General announces that a twice weekly air parcel service to Egypt has been introduced, the first despatch being made on September 13. The air parcels will be forwarded by the England-South Africa and the England-India air mail services respectively, and the latest times of posting at the General Post Office, London, will be 9.0 a.m. on Wednesdays and Saturdays and correspondingly earlier elsewhere. The air parcels despatched on Wednesday will be due to reach Alexandria and Cairo the following Saturday evening, and those despatched on Saturday the following Tuesday evening. The service will thus offer up to five days' gain over the ordinary parcel route via France. The inclusive postage rate will be 2s. 3d. per half-pound.

Portsmouth and Isle of Wight Service

THE number of passengers carried during the week ending September 7 were as follows:—

SPITHEAD AIR FERRY ..	between	Ryde and Portsmouth ..	547
SHOREHAM AIR FERRY ..	"	Portsmouth and Shoreham ..	4
SHOREHAM AIR FERRY ..	"	Shoreham and Isle of Wight ..	6
SHANKLIN AIR FERRY ..	"	Portsmouth and Shanklin ..	6
SHANKLIN AIR FERRY ..	"	Ryde and Shanklin ..	25

Croydon-Le Touquet Service

So popular has the Imperial Airways service from London to Le Touquet become this summer that it has been decided to continue this holiday service, which was scheduled to cease at the end of August, throughout September. Imperial Airways liners will, therefore, leave Croydon Aerodrome each Friday and Saturday throughout September at 3.30 p.m., reaching Le Touquet one hour later.

Czechoslovak Air Traffic

DESPITE the economic depression the Czechoslovak Air Lines were able to increase the traffic on their

services in the first half of the current year compared with the corresponding period of last year. In the first six months 2,462 passengers were carried, compared with 1,749 last year; 45,537 kilograms of luggage (28,084), 100,113 kilograms of merchandise (61,131), and 6,698 kilograms of mail (6,457). The number of flights was 939 (last year 900). Thus, while the number of flights was augmented only to the extent of 4.3 per cent., the traffic increased by over 50 per cent. A provisional air service, to test the possibilities of the route between Prague and Bucharest, is being flown once a week in each direction as from September 11.

Aviation Corporation's Profit

THE Aviation Corporation, and its main operating company, American Airways, have announced a net profit for the first six months of 1933, of 321,057 dollars (£69,795) against a loss during the same period last year of 2,565,371 dollars (£551,689). On June 30, 1933, the current assets were 11,154,945 dollars (£2,535,215), of which a sum of 9,738,282 dollars (£2,117,018) was in cash, government securities or their equivalent. Current liabilities were 368,081 dollars (£80,018).

International Airlines, Ltd.

WE are informed that Mr. W. A. C. Kingham has resigned from the Board of Directors of International Airlines, Ltd. The Western Air Express traffic for 10 days ending September 2 was as follows:—Departures from Croydon for Portsmouth, Southampton and Plymouth, 37. Arrivals from Plymouth, Portsmouth and Southampton, 25. Departures to Bournemouth, 6. Arrivals from Bournemouth, 6.

"Some" Wing Loading

A RIDICULOUS slip was made in the paragraph published in last week's issue dealing with the new Pander transport machine, the wing loading being given as 25 lb. per sq. in. Those fond of aerodynamic calculations may like to work out the probable landing speed of a machine loaded to 3,600 lb./sq. ft. The figure of wing loading of the Pander is, of course, 25 lb./sq. ft.

A NEW VERSION OF THE "WESSEX"

8-Seater now Available without Sacrifice of Range

ONE of the most economical aeroplanes of medium size is the standard Westland "Wessex" (three Armstrong Siddeley 7-cyl. "Genet Major" engines). The standard model, it will be remembered, is a six-seater with an all-up weight of 6,000 lb., and has done excellent work in the hands of Imperial Airways, Sabena, Portsmouth & Isle of Wight Aviation Co., etc. The new version is an eight-seater, but the additional pay load is obtained without sacrifice in range, as the gross weight has been increased to 6,300 lb. Space for the two extra seats has been provided by slightly altering the lavatory and luggage compartment arrangements. For flights of short duration, such as joy riding and short ferry services, the normal "Wessex" at 6,000 lb. gross weight can still be obtained fitted as an eight-seater. In that case the lavatory is omitted.

To meet the extra weight in the 6,300-lb. model, the wheel axles have been strengthened, and medium-pressure tyres have been fitted. It is not compulsory to carry wireless in an eight-seater commercial aeroplane, but the Westland Aircraft Works have anticipated that some operators may choose to equip the machine with wireless, and so have bonded the machine throughout. This will save expense if, later on, a purchaser should decide to fit wireless.

All the important data relating to the "Wessex" eight-seater are shown in the accompanying table. This model is fitted with Townend engine cowl, which are estimated to increase the maximum speed near the ground by 4 m.p.h., from 118 m.p.h. to 122 m.p.h. The cruising speed at the greater gross weight remains the same at 105 m.p.h. and the range is as before, 430 miles (in still air) with full tanks.

THE WESSEX 8-SEATER MODEL 3 Armstrong Siddeley 7-cyl. Genet Major Engines

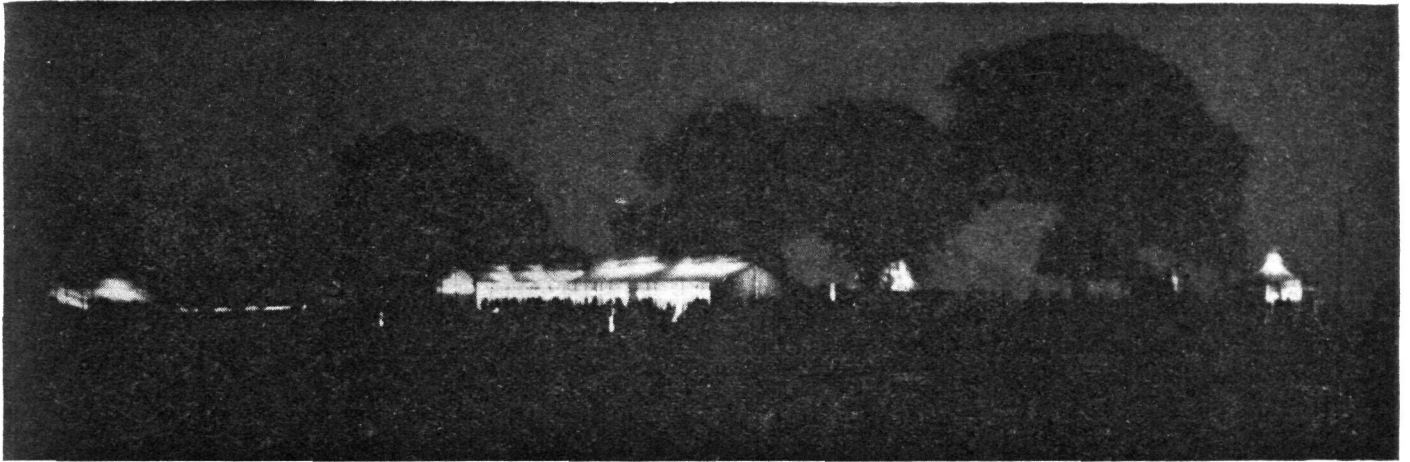
Performance Data

	English	Metric
Max. speed at ground level		
at max. r.p.m. ..	122 m.p.h.	196 km./hr.
Speed at g.l. at 2,200 r.p.m. (normal) ..	110 m.p.h.	177 km./hr.
Speed at g.l. at 2,100 r.p.m. (cruising) ..	105 m.p.h.	169 km./hr.
With full fuel { Duration ..	4 hr.	
{ Range ..	430 miles	690 km.
Rate of climb, g.l. ..	610 ft./min.	3.1 m/sec.
Time of climb to 5,000 ft. (1,525 m.) ..	10.5 min.	
Time of climb to 10,000 ft. (3,050 m.) ..	30.5 min.	
Absolute ceiling (full load) ..	13,700 ft.	4,180 m.
Service ceiling ..	11,400 ft.	3,476 m.
Absolute ceiling—two engines (full load) ..	4,500 ft.	1,370 m.
Stalling speed ..	54 m.p.h.	87 km./hr.

Weight Data

Bare weight of aircraft ..	3,855 lb.	1,746 kg.
Fixed equipment (incl. instruments) ..	74 lb.	34 kg.
Tare weight of goods machine ..	3,929 lb.	1,780 kg.
Tare weight of passenger machine ..	4,030 lb.	1,826 kg.
Movable equipment for passenger machine ..	101 lb.	46 kg.
Fuel and oil ..	845 lb.	380 kg.
Pilot ..	170 lb.	77 kg.
Pay load as goods machine ..	1,356 lb.	616 kg.
Pay load as passenger machine ..	1,255 lb.	570 kg.
Total weight of machine ..	6,300 lb.	2,853 kg.

FROM THE CLUBS



HOOK AERIAL GARDEN PARTY

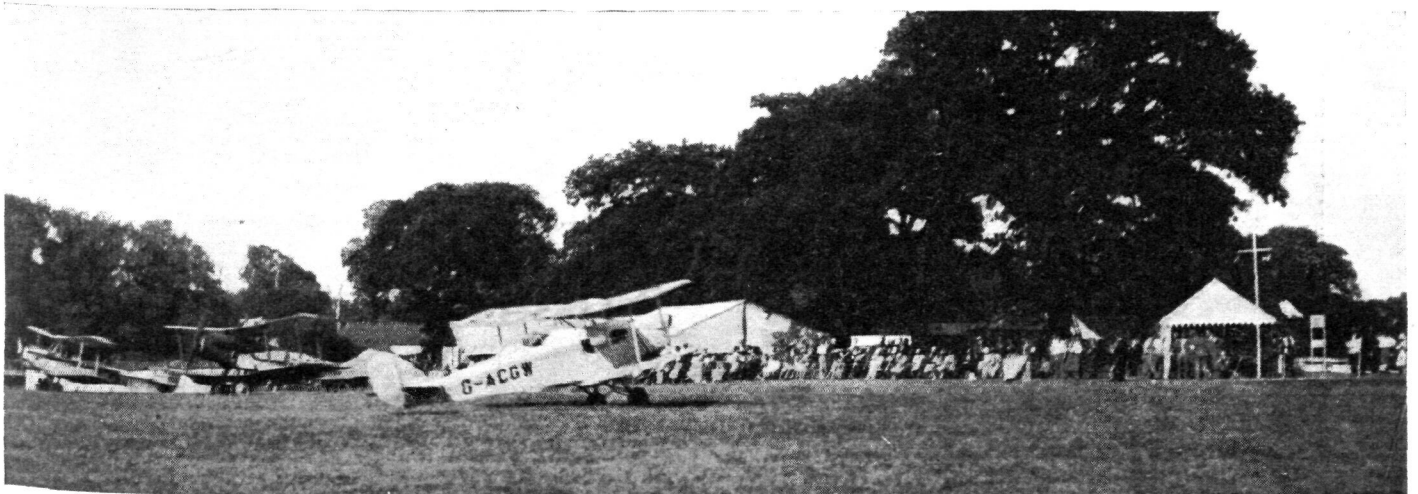
The Reception Tent after dark. (FLIGHT Photo.)

THE Thames Valley Aero Club introduced itself to the public, on Wednesday, September 6, in a very useful and material way. It made itself responsible for the organisation of an Aerial Garden Party in aid of the Surbiton Hospital, Lady Barker kindly acting as hostess. This Garden Party was held at Hook aerodrome, the home of the Club. Incidentally, Hook aerodrome is very conveniently situated, being on the Kingston by-pass, along which run many buses, including a 15-min. service of Green Line coaches—and Green Line coaches are very comfortable. The actual aerodrome is still in a state of development, and visitors by air are recommended to have a careful look before landing, if the wind is blowing parallel to the road, as happily it was on Wednesday, landing is not too difficult. When the intended extensions have been added, it should be quite a good aerodrome.

The programme started off with a Rally of Aircraft. Among machines which were present then and which turned up later were a Pobjoy Klemm, flown by the owner, Sir J. T. Cardin, and fitted with a four-bladed propeller and a very efficient "Burgess" silencer; this machine later won very easily a competition for the quietest machine, Shell-Mex's Pobjoy Comper "Swift," flown by Mr. R. R. Bentley, an "Autogiro" brought over by Mr. R. A. Brie, a "Fox Moth" with Mr. Lloyd, a Desoutter of Rollason Aviation Co., a "Gipsy Moth" from Brooklands, two "Moths" from N.F.S., Hanworth, a Miles "Satyr," an "Avian," a "Spartan" and a Bristol "Fighter," looking very smart and clean, the property of Empire Air Services. Mr. A. C. Brown, who was broadcasting, paid quite a little attention to this later machine, describing the useful work



The Hon. Mrs. Victor Bruce in her "Gipsy Moth." (FLIGHT Photo.)



The Reception Tent by daylight. In the foreground (the second machine) can be seen the Bristol Fighter of Empire Air Services. (FLIGHT Photo.)

The Bombing of the Bucking Ford. The machine is a Miles "Satyr." (FLIGHT Photo.)

it did during the war. On this particular afternoon, and during the evening, it was engaged in the peaceful occupation of joy-riding, and was doing some pretty hard work, but surely it ought to change its name; a machine with the nomenclature of "Fighter" giving joy rides to the general public is bound to bring forth questions in "The House" before long. After the official luncheon, at which the chair was taken by Mr. H. S. Durbin, J.P., the Garden Party was officially opened by the same gentleman.

During the afternoon and evening various events took place. There was a fly-past in formation, led by the Hon. Mrs. Victor Bruce in a "Moth," and considering the variety of machines engaged, the formation was highly creditable. An Air Race of two laps round local landmarks, so that the machines were in sight the whole time, was won by Mr. W. Thorne on a "Tiger Moth"; in spite of the fact that handicapping was done on the spot, there was quite a thrilling finish between the winner and the old "Brisfit"; perhaps the ingenuity of the winning machine's pilot is to be thanked for this as much as the performance of his machine. Mr. Brie demonstrated the "Autogiro," Mr. Thorne did some remarkably slow and beautifully executed rolls on the "Tiger Moth," and Flt. Lt. J. Pugh showed off the paces of the Miles "Satyr" and cut up paper in the air with the same machine. Later in the afternoon a "Bucking Ford," designed in a nightmare and produced by a well-known motor firm, was bombed by the "Satyr," and Mr. L. George descended by parachute. After dark a mock air raid was staged in conjunction with the Anti-Aircraft Detachment of R.E. (T.A.), Surrey Group, during which Mr. John Trantum, in the rôle of an enemy spy, descended by means of an Irvin parachute, but was caught by the searchlights when approaching the ground. This is claimed to be the first time that a night descent has been made in this country at a public display.

The Hon. Mrs. Victor Bruce, ably assisted by Mr. Travers Griffin and others, is to be congratulated on quite a successful afternoon and evening, out of which the Surbiton Hospital must have benefited considerably. If this Garden Party can be taken as being the inauguration of the Thames Valley Aero Club, then the Club Committee chose a very useful method of inauguration. Mr. A. C. Brown is to be congratulated on his broadcasting. He was clear, concise and interesting, and the way he co-operated with the band was quite remarkable, though the band-master also deserves praise for the way he stopped the band every now and then so as not to interfere with Mr.

Brown. The band was that of the Second Norfolks, who played in the place of the band of the Royal Air Force.

Mr. J. A. Mollison turned up during the course of the evening and issued an appeal to the people watching the Display from outside the aerodrome to come inside and so assist their local hospital. Mr. Mollison is a member of the Club. From 10 p.m. onwards a dance was held at Burnt Stub, Chessington, for members of the Club and their friends.

ROUND THE ISLE OF WIGHT

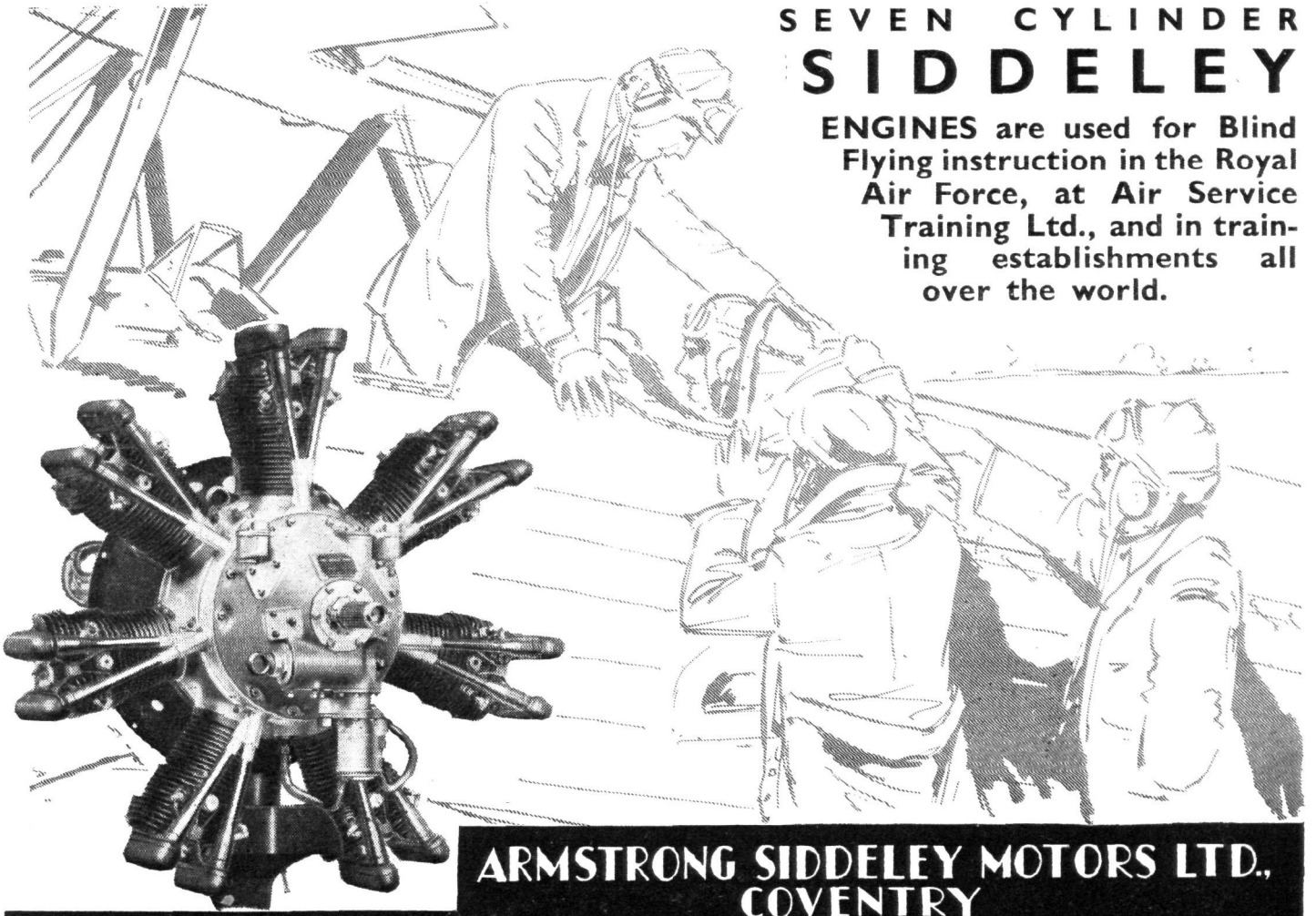
SURPRISING though it may seem, the Isle of Wight Air Race, which was organised by the Portsmouth Aero Club, produced an entry of only eight aeroplanes, and of this small number only five lined up on the starting line. However, quite a good race resulted, with a finish of the kind we now always expect when Messrs. Dancy and Rowarth do the handicapping. We have already explained the course in FLIGHT, and our readers will remember that it consisted of two circuits of the Isle of Wight, starting and finishing at the Portsmouth Municipal Aerodrome. The weather was absolutely perfect. There was just a little ground haze due to the



READY FOR THE START : The five machines lined up at Portsmouth Aerodrome, before starting for the race round the Isle of Wight. (FLIGHT Photo.)

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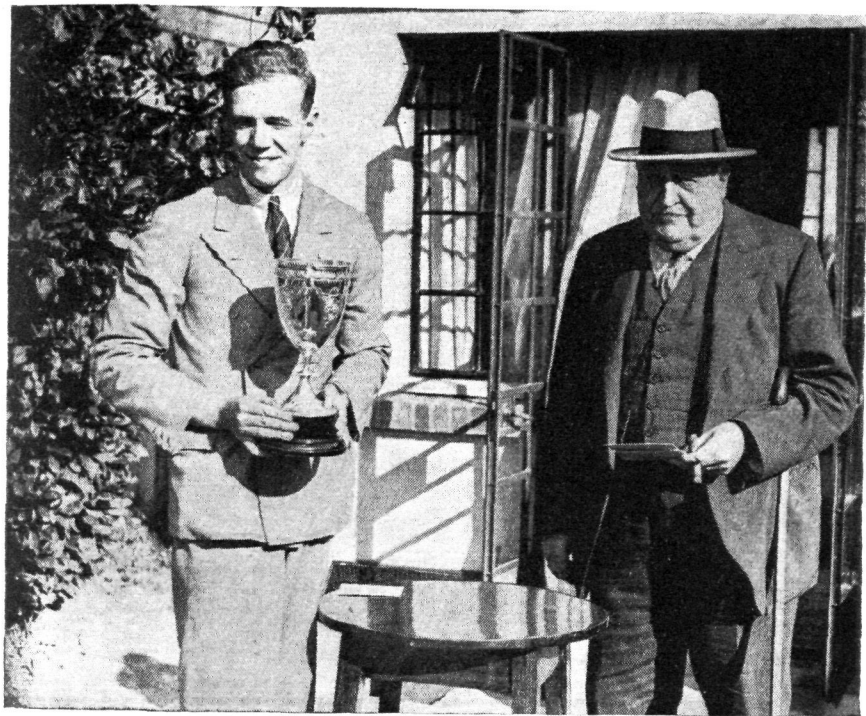
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WINNER AND DONOR : Sir Charles Rose (left) receives the Cup from the donor, Col. J. W. Peters. (FLIGHT Photo.)

heat, but this was not enough to incommode the competitors.

The occasion was purely a club one, and there was no flying meeting in connection with it. It was not to be expected, therefore, that many people would turn up as spectators. Quite a considerable number did so, however, and the club's catering resources were severely tested. They stood the strain nobly, without giving cause for the grouses which one usually hears, on occasions like this, from people who are not served as quickly as they would like to be. The club is now very tastefully decorated, and, with its own orchard in front of it, forms a most pleasant place for taking refreshment on such a day as that of the race.

The finish was not, in itself, spectacular, although the

aeroplanes came in close, and at regular intervals. It was, nevertheless, a very popular one at Portsmouth, as the winner, Sir Charles Rose, is a member of the staff of Portsmouth, Southsea and Isle of Wight Aviation, Ltd., who run all the flying there. He was flying his own "Moth" ("Gipsy I") and by careful, accurate flying and judgment on corners was able to hold his lead until he passed the finishing line. He is a comparative amateur, as he only learnt to fly at the Reading Aero Club about eighteen months ago. The second and third were both from Air Service Training at Hamble. Mr. C. E. Gardner, flying his own Avro "Cadet," and Mr. T. Aga, flying one of the school "Cadets," both having seven-cylinder "Genet" engines, the sound of which should have made the hearts of any of the Armstrong Siddeley engineers beat with pride, had they been there to hear those two machines coming in low over the finishing line.

After the race was over Col. J. W. Peters, the donor of the Cup, presented the prizes. It is to be hoped that his gift will receive the recognition it deserves by enticing a better entry next year.

ISLE OF WIGHT RACE, SEPTEMBER 6, 1933—108 MILES

Pilot	Aircraft and Engine	Handicap	Finish	Speed	Place
Sir Charles Rose	Moth ("Gipsy I")	m. s. 0 00	m. s. 63 22	m.p.h. 102½	1
H. R. A. Edwards	Martlet ("Gipsy I")	8 00	65 28	113	5
T. A. K. Aga	Cadet ("Genet," 7 cyl.)	8 15	64 30	115	3
C. E. Gardner	Cadet ("Genet," 7 cyl.)	8 59	63 39	118½	2
C. S. Napier	Hendy 302 ("Hermes IV")	13 50	65 03	126½	4

SURREY AERO CLUB

It is with the greatest regret that FLIGHT has to announce that the Surrey Aero Club will be closed down from September 1. The aerodrome will still give service to aeroplanes and hangar accommodation will be available; also, a ground engineer will be in attendance.

CINQUE PORTS CLUB

The Annual General Meeting of the Club was held on Wednesday, August 30. Capt. L. A. R. Braddell was elected Chairman, and the following were elected to serve on the Committee: Messrs. Clayton Rickard, C. Hossle, H. Chater, R. Butler, N. Butler, K. K. Brown, K. Waller, and W. E. Davis. After allowing for suitable depreciation of stock the profit for the year amounted to £78 2s. 3d., the most disappointing item in the balance-sheet being the amount realised from subscriptions, mainly due to the fact that many members of the late Club had failed to renew their subscriptions under the new régime. The total flying times for the year 1932, the period under review, amounted to nearly 900 hr., which included 14 "A" licences and 5 "B" licences. With regard to the position of the machine G-ABOG, Mr. W. E. Davis said that although this machine was the property of himself and Mr. Waller, it was to be looked upon entirely as a club machine by members of the Club. The three-seater which he and his wife contemplated buying would also be available for transporting members if in the charge of either of the Club instructors. Capt. Duncan Davies, on behalf of the directors of Brooklands, expressed thanks to the staff and Committee at Lympne for the excellent manner in which they had pulled together. This was due to the excellent feeling of good-fellowship which existed in the Club. He then proposed a vote of thanks to Capt. Braddell and Mr. W. E. Davis, which was seconded by Mr. Clayton Rickard.

During the past week 40 hr. 35 min. dual and about 20 hr. solo had been flown, being the second best week's total for the year. The only soloist of the week was Mr.

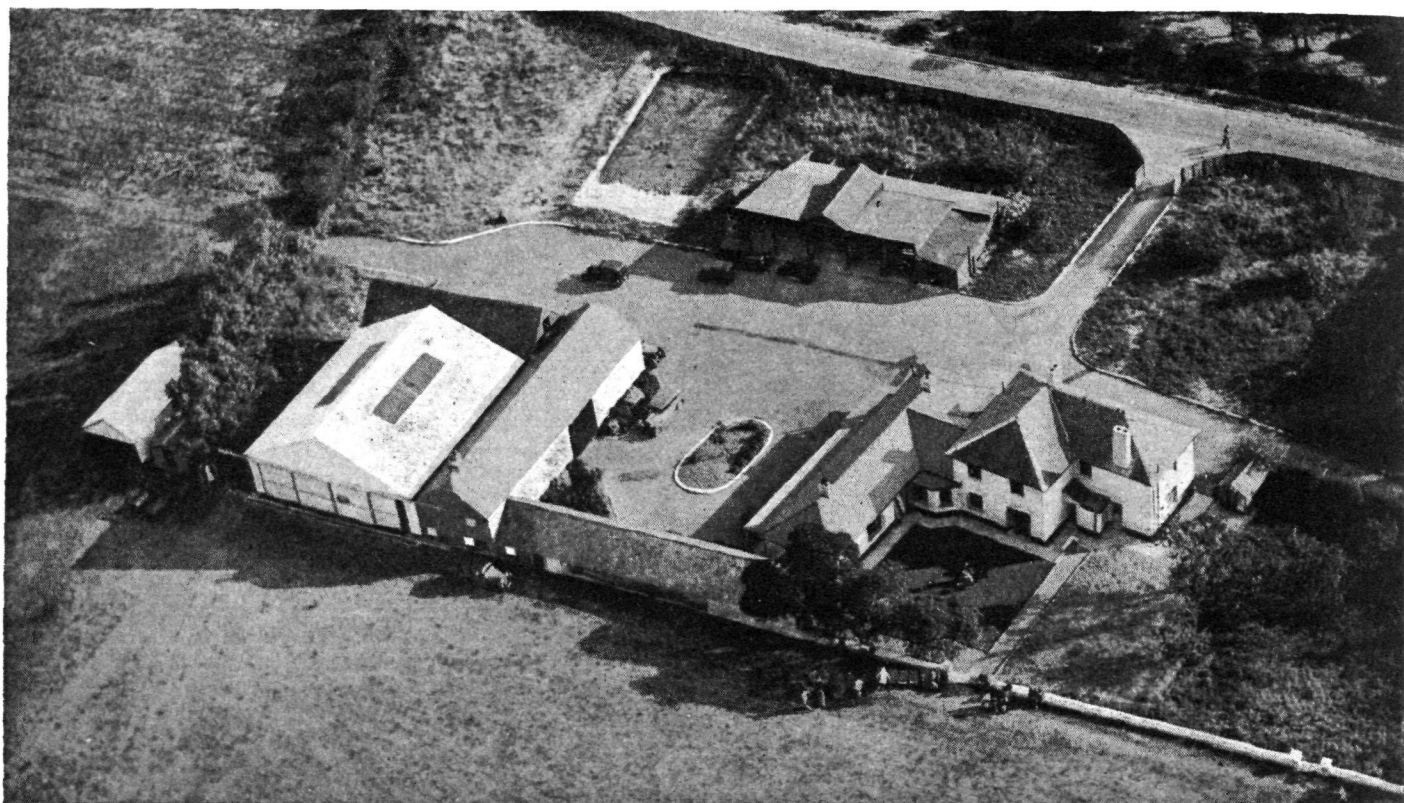
Andrews, who has just been granted a commission in the Royal Navy. Cross-country flights included trips to Le Touquet, Shoreham, Heston, and, of course, many flights between Brooklands and Lympne.

HANWORTH (N.F.S.)

Flying times for the week totalled 115 hr., which included a first solo by Mr. Mycroft and tests for an "A" licence by Mr. Middleton. Cross-country flights were done by Lt. Litchfield-Speer to Sheerness, Mr. Kirwan to Belfast and return, Mr. Reid to Wales, Maj. Osmaston to The Lizard, and on Tuesday, September 5, Mr. Llewellyn flew Mr. Cadbury, of Cadbury's Bros., to Whitby for a wedding reception, and then to Liverpool, where Mr. Cadbury had business to transact. The Master of Sempill left Hanworth on Wednesday, August 30, for Germany and Austria. He was away for a week and visited Frankfurt, Friedrichshafen, Salzburg, Gastein and Munich, his flying time being nearly 21 hr. Flt. Lt. Pugh flew to Hook aerodrome by night to take part in the display there. The workshops are extremely busy, seven privately owned machines having been turned out during the week after repairs and overhauls. On Friday, September 29, a dance will be held, at which it is hoped members will attend; a caricaturist will be in attendance (is that an invitation or a threat?).

BROOKLANDS

The gusty weather has delayed many soloists this last week, Messrs. Brodie and Jones being the only two to qualify; the former is a member of the Singapore Club and holds a licence for seaplanes, and Mr. Jones, who was flying during the war, is returning to Rhodesia to start a flying club there. Mr. Gogte, from India, has joined the school for a "B" licence, and the following new members have started instruction: Messrs. Laurence, Emmanuel, Rubin, Armitage, R. Wilson and Lezard, who is a pupil at the College of Aeronautical Engineering. Mr. Piper flew to Le Touquet in one of the club machines. Brooklands Airways did trips to St. Inglevert, Trowbridge, Carlisle,



AT PORTSMOUTH: An aerial view of the Club buildings, etc., of the Portsmouth Airport. (FLIGHT Photo.)

Belfast, Portsmouth and Manchester. John Grierson has returned from his attempt at a North Atlantic flight, Mr. Raymond Quilter from the United States, and Mr. Johnnie Walker from a Mediterranean cruise. The flying hours for the week totalled 60 dual and 58 solo.

BRISTOL AND WESSEX AEROPLANE CLUB

Visitors by air to the Garden Party on Saturday next are asked to arrive early and to report to the control tent immediately. Prizes for competitions include a set of A.A. maps presented by Capt. A. G. Lamplugh. On the Sunday following the garden party a golf match will be played between the Club and the Aero Golfing Society, and squash and tennis matches against teams from A.S.T. and the Bristol Aeroplane Co.

HAMPSHIRE AEROPLANE CLUB

During the months of July and August a total of 563 hr. flying was recorded on Club aircraft. There have been 18 new members and the following members qualified for "A" licences: Messrs. F. H. Rae, B. W. Stehelin, R. T. Woods, T. C. L. Westbrook, S. E. Rudd, N. S. Seth, J. C. Page, Lt. Com. P. C. L. Yorke, Sub Lt. J. L. Livesey, Sub Lt. D. K. Buchanan-Dunlop and Dr. E. R. Batho. The "Cirrus Moth" G-ABEK has done a total of 662 hr. since it was rebuilt by the Club a year ago; it has been used exclusively for preliminary instruction and solo flying in the initial stages.

KENT FLYING CLUB

Since the Club's last report, Flt. Lt. Barringer has flown the "Autogiro" to Jersey, where he gave a demonstration before about 20,000 people; he also won a handicap race, beating a "Moth" and a Bristol Fighter. Exhibitions of aerobatics and speed-boat bombing have been given at the Folkestone, Whitstable and Deal Regattas. Cross-country flights have been made to Stag Lane, Heston and Reading. New pupils are Miss Joan Ramsey and Mr. Lawrence. High winds have lately rather handicapped flying, but 30 hr. have been put in since the beginning of the month.

MAIDSTONE AERO CLUB

The activity of the School of Flying has been handicapped by the fact that G-ABAI has been undergoing a test for C. of A. The usual Sunday evening dance was well attended. On Sunday, October 1, a motor-cycle gymkhana will be held at the airport, followed in the evening by the Club's monthly "At Home" and gala dance.

LINCOLNSHIRE AERO CLUB

During the week Sunday, September 3, to Saturday, September 9, the hours flown on Club machines totalled 46.

The number of pupils under instruction was 16, and the number of new members 12. There were 170 passengers carried on the Humber Air Ferry and on Monday, September 4, the "Segrave" was flown over to the Isle of Man with three passengers for the motor-cycle T.T. Races. On Saturday, September 16, a Club Members' Rally will be held and all members of other clubs are invited to attend.

NORFOLK AND NORWICH AERO CLUB

Over 30 hr. was done last week, instruction being given to Messrs. W. G. Watson, J. S. Purefoy, F. Dawson Paul, F. M. Rushmer, P. Britton, and Mrs. Sparks. Solo flights were done by Flt. Lt. E. H. Feilden, who visited the Club, Capt. A. M. Diamant, Misses F. Henfrey and W. F. Rudd, Messrs. S. Hansel, A. J. S. Morris, A. Kirkby, H. Pank, E. V. Goodhill, F. Dawson Paul, P. Britton and A. A. Rice. The Club are pleased to welcome Miss Nancy Deacon, a new member, and to congratulate Mr. F. Dawson Paul on completing his oral examinations for an "A" licence, and Mr. F. Low, the Club photographer, on having had three aerial photos accepted by the Royal Photographic Exhibition of Great Britain in London.

The Noel-Hill Cup was won by Mr. Hansel, Miss Henfrey being second, who also won the Ladies' Cup for the first lady home in the race. This competition is a cross-country race open to all pilots of the Club who have passed their cross-country and forced landing tests. Previous to starting off each pupil has to undergo a very strict ground examination from the Chief Instructor concerning the correct way of running up an engine, the testing of controls, taxiing, etc. The course of the race was to Swanton Abbot, then to Honingham, to Stanfield Hall, and home. At the first three points pilots had to drop message bags. Marks were deducted for late or early arrival, and for every yard away from the turning points that the bags were dropped; the strong wind was responsible for a good many points being dropped.

LONDON AEROPLANE CLUB

On Sunday, September 17, the Club will be closed for flying, for on that day the transference to Hatfield will start. There will be a House-Warming at Hatfield on Saturday, September 23, which will take the form of a dinner and dance.

YORKSHIRE AEROPLANE CLUB

Club machines flew 35 hr. and privately owned machines 30 hr. during the past week. The month of August was responsible for just over 127 hr. being flown, and six new members joined the Club. Visiting aircraft included Miss Giles in her "Gipsy Moth," Mr. Thompson in a "Puss Moth," and a D.H. "Dragon" from Hooton.

Some British Triumphs with NAPIER Aero Engines

1918 A Napier-engined D.H. aeroplane climbed to a height of 30,500 ft. in 66 min., the greatest height at this date reached by an aeroplane.

1919 A Napier engined D.H. aeroplane won the Aerial Derby. Speed, 129.3 m.p.h.

1921 A Napier engined Gloster aeroplane won the Aerial Derby. Speed, 163.4 m.p.h.

1922 A Napier-engined Supermarine flying boat regained the Schneider Trophy for Great Britain at a speed of 149 m.p.h.

1923 A Napier-engined Gloster aeroplane won the Aerial Derby. Speed, 192.4 m.p.h.

1926 The first non-stop crossing of South Atlantic Ocean carried out by Commandante Franco flying a Dornier flying boat with two Napier engines.

1927 Schneider Trophy regained for Great Britain by a Supermarine-Napier seaplane flown by Ft.-Lieut. S. N. Webster, A.F.C. Speed, 281.669 m.p.h. Two machines completed the course—both fitted with Napier engines.

1928 The greatest formation flight ever carried out was made with four Supermarine-Napier Southampton flying boats, each fitted with two Napier engines. The machines flew from England to Australia, round Australia, and back to Singapore, covering 180,800 engine miles without mechanical trouble.

1929 The first non-stop flight from England to India was carried out with a Fairey monoplane fitted with Napier engine. 4,130 miles in 50 hr. 38 min.

1930 For the fifth successive year Napier engines were selected by the Royal Air Force for their annual Service flight from Cairo to Cape Town and back. As on previous flights, no mechanical trouble was experienced.

1931 The first and only non-stop flight from England to Egypt was carried out with a Fairey monoplane fitted with Napier engine. 2,857 miles in 30 hr.

1932 Captain Sir Malcolm Campbell set up a World's Land Speed Record of 253.968 m.p.h. with his Napier-engined "Bluebird" car.

1932 Fourteen officers and 534 men were transported from Ismailia to Iraq and back—a distance of 1,728 miles over nearly waterless desert. The aircraft used were Vickers "Victoria" troop carriers, each fitted with two Napier Lion engines.

1933

Squadron-Leader O. R. Gayford, D.F.C., A.F.C., and Flight-Lieut. G. E. Nicholletts, A.F.C., by flying a Fairey (Napier) monoplane from Cranwell, England, to Walvis Bay, South-West Africa, set up a World's long distance non-stop flight record—a distance of 5,309 miles covered in 57 hr. 25 min.

New types of Napier Engines now being developed give promise of an improved performance which will enhance this record.

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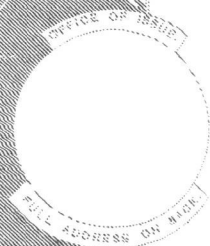
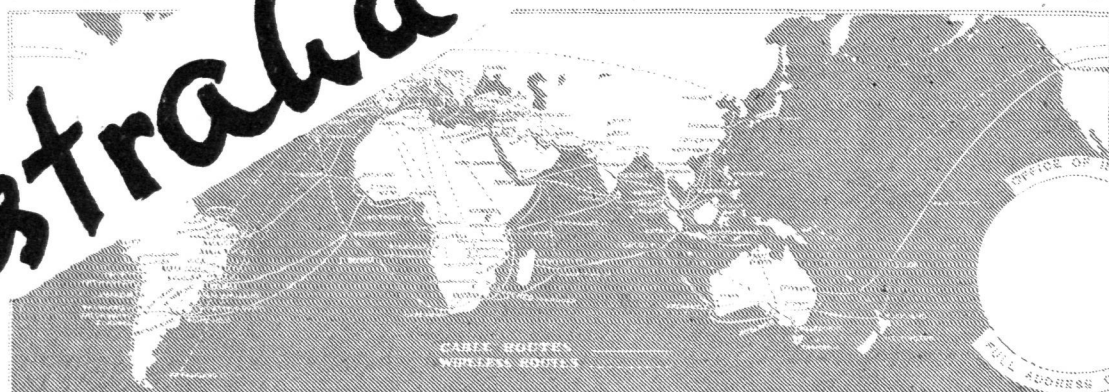
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Among the joy-riders during the week was an old "young man" of nearly 79 years.

THE B.G.A. GLIDING MEETING

Following the preliminary announcement that an Open Gliding and Soaring Competition would be held at Sutton Bank, Yorkshire, on October 7 and 8, the British Gliding Association have now decided to hold three major contests—Distance, Altitude and Duration. Yorkshire will be well represented in the competition. Mr. Fred Slingsby, of Scarborough (who won Lord Wakefield's Trophy last year), will be flying his "British Falcon" sailplane, Mr. J. P. Watson, of York, will fly his "Prüfling," and Mr. Little will fly the "Tern" sailplane, which was constructed by Airspeed, Ltd., when that firm had their establishment in York. The Yorkshire Clubs, Bradford and Ilkley, will also be taking part. Mr. Hardwick, of Birmingham, is expected to bring his "Falcon" (also made by Mr. Slingsby), and other entries are expected to be received from the Preston Club, Manchester Club, Newcastle Club, London Club, Dorset Club, and Mr. G. M. Buxton with his "Scud II" sailplane.

Sutton Bank site is 6 miles from Thirsk on the Thirsk-Pickering-Scarborough Road, 12 miles from Hemsley, 22 miles from York, Ripon and Northallerton, and there are many other towns within a 50-mile radius. The hills are high and suitable for S., S.W., W., W.N.W., a good main road runs over the hill, and a hard second-class road runs along the landing and launching ground within 300 yd. of the edge. The top is flat, covered with short grass and heather, and is free from walls and hedges. It is suitable for height, duration, distance, cloud and thermal soaring.

READING AERO CLUB

The total flying times for the week ending Thursday, September 7, amounted to 51 hr.; there being 17 pupils in training. A new pupil is Mr. Thomas, and "A" licences have been granted to Messrs. Hoggarth and Lovelock. Mr. Debenham, who was recently awarded a prize of £5 in the *Daily Express* Flying Competition, went solo after only 3 hr. 10 min. instruction, which cannot have been beaten often, if at all. The Club have accepted a challenge to a "Dawn Patrol" on Sunday, September 17.

DUHALLOW HUNT GYMKHANA

Mr. C. F. French (chief instructor of the Irish Aero Club) and Lady Heath were amongst the pilots at the Duhallow Hunt gymkhana and air display at Castletown-roche, County Cork, on Wednesday, September 6. A considerable amount of joyriding with "Gipsy Moths" was done during the afternoon and evening, and Mr. French gave an excellent display of aerobatics and crazy flying.

AERO CLUB FOR HYDERABAD

As the result of the persistent efforts of Mr. Babar Mirza, a flying club is to be opened at Hyderabad. The new club will provide a course for the Indian "A" licence and for the International Certificate issued by the Aero Club of India and Burma. The club hopes to be able to provide all the amenities of a social club and later Mr. Mirza intends to start a weekly passenger service between Bombay and Hyderabad.

NORTHERN INDIA FLYING CLUB

At an emergency meeting of the Northern India Flying Club, under the chairmanship of Mr. Gokal Chund, it was

decided that the flying activities of the Club should begin in October of this year. Flt. Lt. H. W. Raeburn and Mr. C. D. Wright will be engaged as instructor and chief engineer; a "Moth" has been purchased in England, and a Desoutter belonging to a private member has been placed at the disposal of the Club.

AN AIR SERVICE TRAINING RECORD

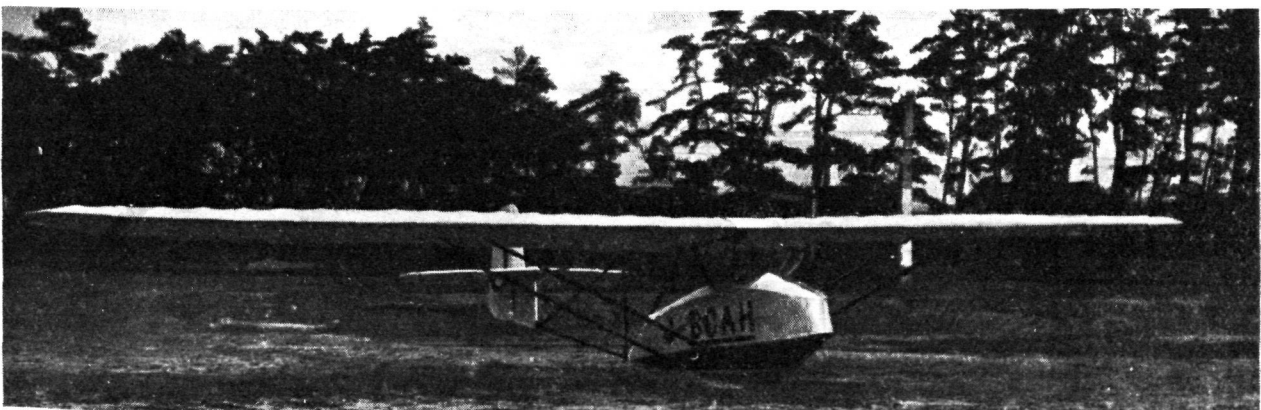
Air Service Training has had a remarkably busy month. The land and sea instructional machines of the School have flown 1,046 hr. during August, representing a mileage of approximately 100,000. This is a magnificent record of training activity.

Ground instruction has been equally active. There has been an influx of new civilian pupils and, in addition, a number of the R.A.F. Reserve *ab initio* pupils have attended for their fortnight's ground course. The following pupils arrived during the month:—Mr. Dyer, one of the winners of the recent *Daily Express* Flying Training Competition has arrived for his "A" licence. Mr. Mukadam for his "B" pilot's and "X" ground engineer's licences and the blind-flying course. Mr. Choksi for the ground engineer's and wireless operator's courses. Lord Amherst has been taking a course on flying-boats and obtaining his "B" licence endorsements on the following machines:— "Avian" seaplane, "Cadet," "Tutor," "Siskin" and Avro "V." Mr. Ghatge is taking his "X" ground engineer's licence, his "B" pilot's licence, the long night-flying course and the blind-flying course. He is also to fly the Avro "V." Mr. Beale has joined for the new long course which starts this month. Six other pupils are also joining within the course of the next few days. Mr. Gandar Dower and Mr. P. W. Kennedy have completed their blind-flying courses. Mr. Hollins has commenced a seaplane course and has been flying the Avro "V." Flying Officers Long, Dease and Wood, and Messrs. Ghatge and P. W. Kennedy have been night flying in preparation for their "B" licence night-flying test, a test which Herr August Hell passed during the month. Mr. Macphail attended for a short flying course. Mr. L. M. K. Williams has obtained his radio telephony operator's licence.

On August 4 the School was visited by Marshal Chang Hsui-Liang, his son Raymond, and his secretary. Other visitors have been the delegates of the World Economic Conference and the Auxiliary Air Force 600 "B" City of London Squadron.

The excellent weather during the month has permitted some very keen cricket matches. These are held every Tuesday and Saturday throughout the summer months. The tennis court has been in almost incessant use, and had seen some excellent games between the staff and pupils and between the school team and local clubs.

Air Service Training now have a yacht club at Hamble. They have already purchased two "Star" class sailing dinghies, and more will be acquired when the demand necessitates it. Group Capt. Barton, the Commandant of the school, is a member, and keeps his six-metre boat, the *Bird o' Freedom*, moored off the seaplane slipway. Two other members have sailing dinghies, and another has a boat of the "West Solent" class. Membership is not confined to present members of the school, but is also open to those who have been there before. Racing with other clubs is carried out two days a week.



A JAPANESE GLIDER: This glider, designed by Prof. H. Sato, was constructed by the students of the Aeroplane Department of the Imperial University, Fukuoka. Pilot Shizura made a flight of 8 min. 15 sec. on this glider.



A HUNGARIAN PRODUCTION: Mr. Anthony Banhidý and the "Gerle 13" biplane he has designed.

THE "GERLE 13" BIPLANE

AN interesting visitor to the A.S.T. School at Hamble last week-end was Mr. Anthony Banhidý with his "Gerle 13" (Armstrong-Siddeley "Genet Major"). "Gerle" is the Hungarian for Turtle Dove, and the figure 13 stands for the thirteenth aeroplane which Mr. Banhidý has designed and had built at the Műegyetemi Sportrepülő Egyesület or, to put it into English, the Sport Flying Club of the Budapest Technical University. Mr. Banhidý is engineer and designer in charge of the workshops of the Club. That he has great faith in his machine is shown by the number of long-distance flights which he has made.

His latest tour started with a non-stop flight from Debrecen, in Hungary, to Rapla, in Estonia. This distance of 1,380 km. (857 miles) was covered in 13 hr. through execrable weather. He encountered rain the whole way and a very fierce head-wind. As a matter of fact, the conditions were so bad that the Meteorological Office sent a message down to the aerodrome telling him not to go, but this arrived ten minutes after he had left. That day the Estonians lost a large number of machines which were "blown off the aerodrome."

He continued his tour with flights to Helsingfors, Stockholm, Copenhagen and then to Croydon. This latter, he

says, compensated him for all his other vicissitudes. He made the trip of 1,080 km. (672 miles) in 6 hr. 45 min. with the help of such a tail wind as pilots only encounter once in a lifetime. By the time this appears in print he will, if all goes well, have returned to Budapest, non-stop from Croydon.

His machine is a normal biplane with N interplane bracing struts. The fuselage is of welded steel tube construction with wire bracing for the rear half, and the wings have normal spruce and plywood box spars and plywood ribs. The leading edge is also plywood covered. The tail units are of welded-steel tube and fabric covered. Everything is quite straightforward except that at the present time the front seat has a large fuel tank in it, giving the machine a range of 15 hr. The wing section is Göttingen 412, with a 20-deg. stagger and 2-deg. dihedral. The normal tankage is 3½ hr. The undercarriage is of the semi-divided type, with rubber-in-tension shock-absorbing legs. The weight empty is 460 kg. (1,012 lb.) and fully loaded 920 kg. (2,023 lb.). The top speed is 185 km.p.h. (115 m.p.h.) and the landing speed 60 km.p.h. (37 m.p.h.). The climb as a single-seater is 1,000 m. (3,280 ft.) in 3 min. A previous reference to this machine appeared in FLIGHT for June 8 last.



THE YUGOSLAVIA KING'S CUP RACE

One of the Pilots Thrown Out of his Machine

IN this year's race for King Alexander's Cup, held on September 6, there were three categories of competing aeroplanes.

In the first category Breguet XIX's, with Hispano 650-h.p. engines, made a circuit of 875 miles. This was accomplished by five of the twelve competitors in very little over six hours, the difference in time between the first and fifth machine not being more than 4 min. The winner of the King's Cup, Capt. Hinko Hauer, pilot, and Lt. Boris Kelo, navigator, accomplished the race in 6 hr. 6 min. and 26 3/10 sec., i.e., at 143 m.p.h., which must be considered a very good average speed for this kind of aeroplane. As well as gold watches, they won a present from H.M. the King and a prize of Din. 30,000.

In the second category were single-seater fighters of the type Avia, with "Jupiter" engines. They had to cover a distance of 171 miles, in the course of which they had three times to climb up to 4,000 m. height. The winner, Maj. Zd. Gorjup, made the circuit in 1 hr. 6 min. and 42 sec.

In the third category were training aeroplanes of the type Fizir, which had to make a circuit of 307 miles.

During the race of the two-seater military machines (Breguet XIX's) there was a unique and dramatic event. Of the 12 aeroplanes which left between 5 and 6 o'clock in the morning from the aerodrome of Novi-Sad, all had to pass through a very bumpy area, near the town of Mostar,

and were very much handicapped by disturbed atmospheric conditions. In spite of this, most of the aeroplanes kept up nearly the same very good average speed, but one of them, coming into this zone 700 m. above the ground, piloted by N.C.O. Skeledjia and navigated by Lt. Panitch, bumped so violently that the pilot was thrown out of the aeroplane after breaking his harness. The navigator, Lt. Panitch, wishing to save the machine, climbed into the pilot's cockpit after a great struggle with the wind. He then took charge of the controls of the aeroplane for the first time in his life in an endeavour to get the machine in safety to the Mostar aerodrome, about 31 miles farther on. Arriving there he made several efforts to land, and at last was successful, though slightly damaging the aeroplane. He himself only had slight injuries. The pilot was saved by his parachute and arrived at the aerodrome on foot the same afternoon.

The opinion that aircraft are still the most dangerous means of transport has in this instance been repudiated by the fact that after his perilous adventure in the air Lt. Panitch was only slightly injured, while one of the occupants of the ambulance which rushed forward to his assistance on the descent of the aeroplane was much more seriously injured, having his arm broken in an accident caused by the brakes of the car being jammed on too suddenly.

M. M. J.

AIRISMS FROM THE FOUR WINDS

Byrd's Antarctic Expedition

REAR-ADMIRAL BYRD will sail from Boston on Monday, September 25, on an expedition to the Antarctic. The expedition will consist of about 70 personnel and may extend over a period of two years. A special Curtiss-Condor machine has been built at St. Louis which is fitted with two 700-h.p. Wright "Cyclone" engines. Admiral Byrd will take this machine with him; it cruises at a speed of 155 m.p.h., carries a crew of three and 15 passengers, and can be equipped with skis for landing on snow.

Monument to Mr. Hinkler in Italy

A MONUMENT to Mr. Bert Hinkler was unveiled on Sunday, September 10, at the Passo Della Vacche, in the Pratomagno Alps, where he crashed in January of this year. This monument has been erected by the Aretino Aero Club, and has engraved on it a victor's fasces, crossed by an eagle in flight. On it is inscribed, "To the long-distance airman, Herbert Hinkler, who fell here 8-1-XI."

Attack on Long-Distance Record

MM. ASSCLANT AND LEFEVRE were to have left Le Bourget this week for Oran in readiness for an attempt to beat the long-distance record, probably in October. They will fly a Bernard low-wing monoplane fitted with a 650-h.p. Hispano-Suiza engine. The intended route is Le Bourget, Bizertain, Tunis, Greece, Syria, Basra, Jask, Hyderabad, and Calcutta.

Polish Bid for Long-Distance Record

Two Polish airmen, Col. Filipowicz, Director of Civil Aviation, and Capt. Lewoniewski, are attempting to gain for Poland the long-distance record. They left Warsaw on Monday, September 11, and are flying eastward.

Round the World Flight

In the year 1916, a Latvian youth, by name Herbert Cokuns, bought an army aero engine for two pounds in a street market in Riga. Incidentally, the engine had been stolen from a British machine which had been brought down by a German pilot during the war. Around this engine Herbert Cokuns built an aeroplane. He then decided to fly round the world on it. On Monday, September 11, he arrived at Le Bourget, having flown from Riga without mishap.

International Air Races, Chicago

THE International Air Races of Chicago, organised at the occasion of the Century of Progress Exhibition, took place from Friday, September 1, to Monday, September 4. James Wedell, flying a Wedell Williams 44, Pratt & Whitney "Wasp" engine, which machine was illustrated in



CONGRATULATIONS! Mr. Geoffrey Raoul de Havilland and Miss Gwendoline Alexander, who left Stag Lane Aerodrome after their marriage on September 9 on a honeymoon tour of the Continent.

FLIGHT for July 13, claims a new world's speed record for landplanes, with a speed of 305 m.p.h. (490 km./hr.). Wedell also won the race for the Phillips Trophy at an average speed of 246 m.p.h. During this race there was one fatal accident, Miss Florence Kingensmith being killed. The 200 cu. in. race was won by Wittam, flying an aeroplane of his own design and powered with a Pobjoy engine, he averaged 120 m.p.h. The women's race was won by Mrs. Hsizlip, flying another Wedell Williams machine; her average speed was 191 m.p.h.

Gordon Bennett Balloon Race

As was recorded in FLIGHT for last week, the race for the Gordon Bennett Trophy started on Saturday, September 2. The two Polish entrants landed on a tree 60 miles north of Quebec City. Apparently the winner will be Com. T. W. G. Settle, of the U.S. Navy, who has covered some 750 miles. He also won the race last year.

R.A.F. Flying-Boat Tour

THE four R.A.F. flying-boats which have been on a visit to Helsingfors arrived at Riga on Tuesday, September 12.

Tour of France

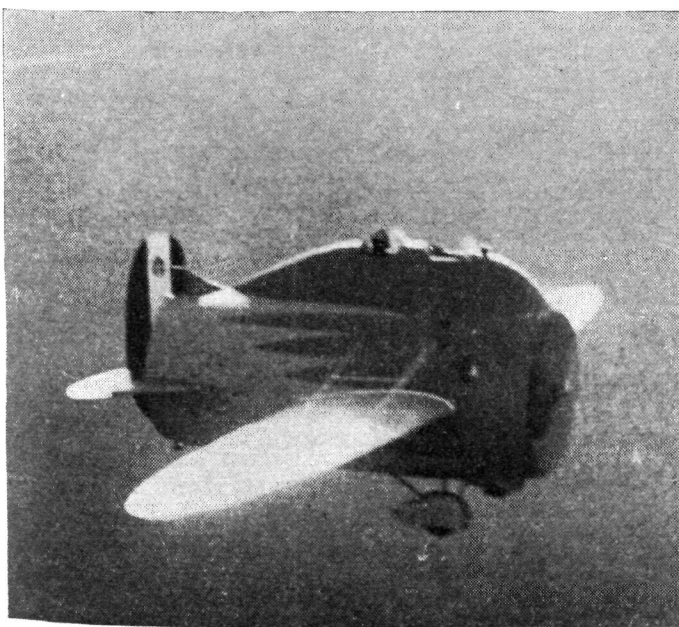
A FLIGHT of machines left Orly on Saturday, September 9, for a tour of France, organised by the Federation Nationale Aéronautique. Eleven machines, seven military and four commercial, all of latest French type, are taking part. The object of the tour is to show the latest machines to the people in the provinces.

Fatal Air Crash in Russia

SOVIET RUSSIA has suffered a serious loss in an air crash which occurred on Tuesday, September 5, 50 miles south of Moscow. Among the killed are M. Baranoff, Assistant Commissar for the aviation industry; M. Goldman, the Chief of Civil Aviation; M. Zazaroff, a member of the State Planning Commission; and M. Gorbunoff, a factory director.

Comper "Mouse" Flies

On Monday last, Flt. Lt. N. Comper made the first test flight at Heston in the new Comper "Mouse," and generally speaking the new machine came up to expectations, although an incident occurred which may well have prevented Mr. Comper from learning as much during the 40-min. flight as he would otherwise have done. He carried a sprig of white heather "for luck," and a seed



LOOKS A BIT FISHY! It is not, however, a photo of a tropical fish taken in the Zoo Aquarium, but an aerial view of the latest Stipa Caproni flying "Venturi tube"—a previous model of which was briefly described in "Flight" of October 20, 1932.

blew into his eye, so that he was flying blind for about a quarter of an hour, which must have been a very terrifying experience in a machine making its first test flight. However, the incident did serve to prove that there can be nothing much wrong with the "Mouse," otherwise the flight might have ended very differently. The machine, it will be recalled, is a low-wing cantilever monoplane three-seater cabin type, with retractable undercarriage. The engine is a "Gipsy Major."

Antoni Variable Camber Wing in the Air

A HIGHLY successful test flight of the new Ugo Antoni variable camber wing was made at Brockworth on Friday of last week, September 8. In spite of a very strong, gusty wind, which necessitated men holding on to the wing tips while the machine was gathering way. The flight was made by an Italian pilot, who has tested previous machines for Mr. Antoni, but as he has had to return to Italy, it will be some little time before further tests are made. It was found that with the wing at maximum camber the rudder of the Breda monoplane on which the wing has been mounted was somewhat inadequate, and a larger rudder is to be built by the Gloster Aircraft Company, who made the wing for Mr. Antoni. With the wing at full camber the machine stood still in the air, the wind being approximately equal to the minimum speed of the machine.

Blériot Factory Closed

THE Blériot aircraft works, situated just outside Paris, have closed down. M. Louis Blériot, who was the first man to fly the Channel, has announced that he cannot get sufficient contracts to enable him to carry on. A few years ago he was employing 3,000 men; now the number was only 10. He has designed about 200 different models, and has built over 10,000 machines. At one time during the war he was turning out 13 machines a day. M. Blériot complains that in 1926 he submitted plans for seaplanes similar to those used by Italy in their recent great flight, but they were rejected. He also has plans for transatlantic passenger machines which he feels sure will be approved in the next few years.

Another Stratosphere Attempt

AN attempt at a stratosphere ascent will take place shortly in Moscow. The Soviet balloon "S.A.I." will be used. It is hoped to reach a height of 59,000 ft.

Engineers for Ireland

THE Irish Free State Department of Defence is to appoint two commissioned officers to the Army Air Corps for training as aeronautical engineers. Applicants must hold a degree in engineering (or a diploma), be unmarried



PRACTICAL RESEARCH: Sir John Carden, who has been doing a lot of useful experimental work in connection with silencers for aircraft engines, with his specially silenced Klemm, which won the prize for the "quietest engine" at the Hook Aerial Garden Party on September 6 (see page 911). (FLIGHT Photo.)

and not more than 26 years of age. Mr. M. A. Doyle, B.Sc., A.F.R.Ae.S., the chief aeronautical engineer to the Army Air Corps, is not a commissioned officer but holds his post as a civilian. Some of the ground engineers are also civilians.

Italian Explorers in Persia

NEWS has been received in Rome of the Italian explorers, Count Leonard Bonzi and Professor Desio, who left Milan at the end of July. They flew to Teheran, which they reached on August 1. The mission is a scientific one, and the object to explore some of the larger mountain ranges in Persia.

Another Speed Bid by Italy

THE *Daily Mail* reports that preparations are being made at Desenzano for another attack on the speed record. The attempt will be made by Lt. Agello, who at present holds the record himself. Alterations have been made to the floats, which are now only just large enough to hold sufficient petrol for a short flight. These floats are now so small that they are not capable of supporting the machine on the surface of the water if it is motionless, and it is only held up when in motion on the principle of the aquaplane.

New Aerodrome near Freilassing

HERR HITLER has chosen a new site for an aerodrome near Freilassing, to take the place of the Reichenhall aerodrome. Freilassing is a few miles distance from the Austro-Bavarian frontier, not quite five miles from Salzburg.

New Aircraft

THE consumption of new aircraft proceeds at a steady pace, as the latest registrations show. Production of the C.30 wingless type "Autogiro" with direct control is foreshadowed by the registration of three of these machines, G-ACIM, IN, and 10. Percival "Gulls" are now owned by Mrs. Cleaver, Mr. W. G. Robson and Air Service Training, these being G-ACIP, ACIR, and ACIS respectively. "Dragons," which de Havillands are turning out as fast they can, are now registered to Lord Furness, Highland Airways, Ltd., Midland & Scottish Air Ferries, Ltd., and Mr. W. L. McEwen. Midland, of course, already have one or more of the type, and certainly Lord Furness has had his for some time. These new ones are G-ACIT, ACIU, ACIW, ACJS. Three miles "Hawks," G-ACIZ, ACJC and ACJD are the last on our list. When delivered these will belong to Sir Alfred Beit, Mrs. B. Macdonald and Dr. D. Mintzman.

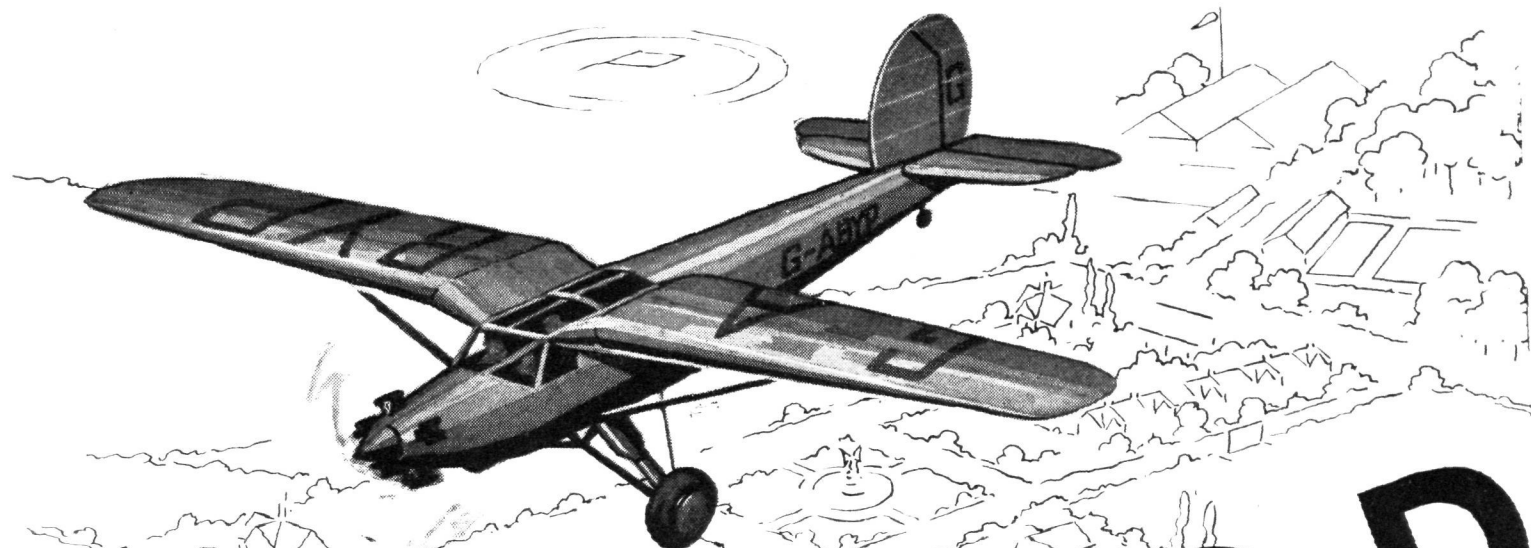
International Air Traffic Association

ON September 27 Lord Londonderry, Secretary of State for Air, will open the session of the International Air Traffic Association, which is to meet in London at the Old Hall of Lincoln's Inn for two days of discussion. Mr. Woods Humphery will be chairman of the session. In all 21 air transport companies and four international associations will send delegates, and the following countries will be represented:—Sweden, Italy, Finland, France, Czechoslovakia, Denmark, Germany, Great Britain, Holland, Spain, Norway, Austria, Poland, Belgium, and Switzerland. The discussions will be held in private.

Royal Aeronautical Society Lectures

THE following lectures have been arranged for the coming session of the Royal Aeronautical Society and Institute of Aeronautical Engineers. All lectures, except the Joint Meeting on March 8, will be held at the Royal Society of Arts, 18, John Street, Adelphi, W.C.2, at 6 p.m. 1933.

Oct. 12	.. Air Traffic Control	Maj. R. H. S. Mealing, A.R.Ae.S.I.
Nov. 2	.. Variable Pitch Airscrew and Variable Gears	Mr. W. G. Jennings B.Sc., A.F.R.Ae.S.
Nov. 16	.. The Stiffness of Aeroplane Wings	Mr. H. Roxbee Cox, Ph.D., D.I.C., B.Sc., A.F.R.Ae.S.
Nov. 30	.. Tail Buffeting	Dr. W. J. Duncan.
Dec. 7	.. Possible Future Development of Aircraft Engines	Mr. A. H. R. Fedden, M.B.E., F.R.Ae.S.
Dec. 14	.. Light Alloys for Aeronautical Purposes, with Special Reference to Magnesium	Dr. L. Aitchison.
1934		
Jan. 11	.. The Testing of Aircraft Landing Mechanisms and some Factors Affecting Design	Mr. W. D. Douglas, A.F.R.Ae.S.
Feb. 8	.. Engines	Capt. A. G. Forsyth.
Mar. 8	.. Joint Lecture with the Institute of Automobile Engineers and other Bodies. Title to be announced later	
Mar. 15	.. Some Development in Aircraft Construction	Mr. H. J. Pollard, A.F.R.Ae.S., Wh.Ex.
Mar. 29	.. Results from the Compressed-Air Tunnel	Mr. E. F. Relf, F.R.Ae.S., A.R.C.Sc.

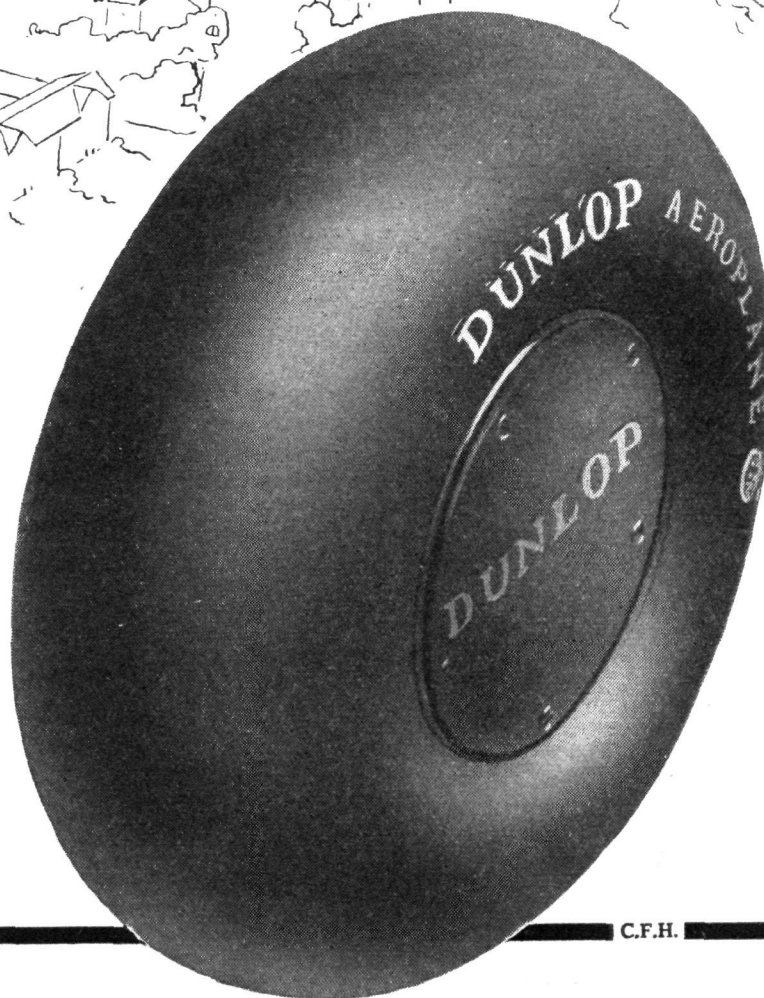


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FOX MOTHS FOR SPAIN

Specially Equipped for Photographic Survey



FOR THE SPANISH GOVERNMENT TOPOGRAPHICAL SURVEY DEPARTMENT: Four de Havilland "Fox Moths" ("Gipsy Major") which have been specially equipped for aerial survey work. (FLIGHT Photo.)

THE Spanish Government has recently placed an order with the de Havilland Aircraft Company for four "Fox Moths" ("Gipsy Major") aeroplanes to be used purely for photographic work. The acceptance tests were carried out the other day by a representative of the Spanish Government, and the machines will be flown out to Madrid shortly. The formation is to be led by Mr. Cox, of the de Havilland School of Flying at Hatfield.

For photographic air survey work the "Fox Moth" has been specially modified in the matter of equipment, etc. The space occupied in the standard machine by the luggage is filled, in the survey machines for Spain, by an extra petrol tank of 17 gallons capacity which, in conjunction with the centre-section tank, brings the total petrol capacity up to 40 gallons, or sufficient for a still-air range of 650 miles.

The seating accommodation has also been slightly re-

arranged in that a swivelling seat is provided for the photographer, normally placed approximately in the centre of the cabin, but capable, when not being used for survey work, of being moved to the side of the fixed seat.

A special Zeiss camera is so mounted that it can be raised and lowered in order to accommodate two sizes of cone. When the camera is not in use a sliding glass window covers the camera opening.

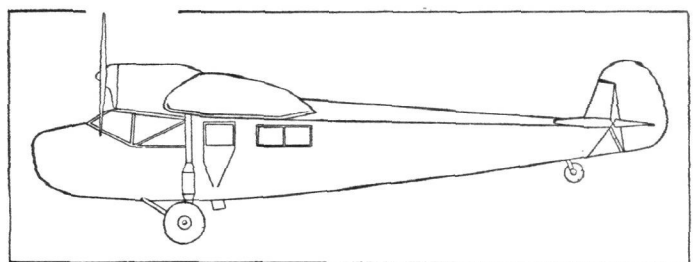
The pilot's cockpit is provided, in addition to the normal equipment, with blind-flying equipment, including a Reid & Sigrist Turn Indicator and fore-and-aft level, as well as with a specially sensitive rate-of-climb indicator. The pilot's cockpit has a piece of plate glass fixed in the floor to enable the pilot to see the ground which is being surveyed. A coupé top is provided for the pilot's cockpit, as well as a streamline head-rest similar to that fitted on the speed model of the "Fox Moth." Handley Page automatic wing-tip slots are fitted.



A WACKETT MACHINE FOR "SMITHY"

SAID to be the aircraft basis of Sir Charles Kingsford Smith's tender for the Australia-Singapore link in the England-Australia air service, the Wackett "Codock" (a contraction of Cockatoo Dock) is a cantilever high-wing monoplane, to be powered by two Napier "Javelin" engines. The machine, construction of which has now been begun, is estimated to have a maximum speed, according to our Australian contemporary *Aircraft*, of 140 m.p.h. and a cruising speed of 116 m.p.h., while the estimated rate of climb is 800 ft./min. and the ceiling 19,000 ft. With one engine stopped the ceiling is calculated to be 5,000 ft. The range on one engine is expected to be in the neighbourhood of 400 miles. The contract price for the machine is stated to be £3,700.

The general arrangement of the "Codock" is shown in the accompanying side elevation, reproduced by courtesy of the Vacuum Oil Company. It may be added that the construction is planned very much on Fokker lines, the wing being a plywood-covered wooden structure and the fuselage a welded steel tube girder with fabric covering.



Wing Com. Wackett is reported to have had the design all planned out before receiving the order for the machine, but certain changes had to be made as a result of the substitution of the Napier "Javelin" engines for those originally contemplated. When the "Codock" has been flight tested, it will, it is expected, be tried out on a flight to New Zealand side by side with the old *Southern Cross*.



C. of A.'s Abroad

THE French Government does not, at present, recognise Certificates of Airworthiness of foreign aircraft, even though the machines conform with the regulations of the International Commission of Air Navigation. Recently a D.H. "Dragon" was responsible for 55,000 francs being paid to French Customs, yet this machine could not be registered as a French machine. The French Air

and Finance Ministries have decided to settle this question forthwith. The Aeronautics Branch of the U.S. Department of Commerce also want to revise the requirements for C. of A.'s. It considers that they should be based more on theoretical considerations than on experience. It is hoped that this will result in improvement of design and performance. The new requirements will become effective at the beginning of next year.

AIRPORT NEWS

CROYDON

AMONGST various notable air travellers last week Imperial Airways carried Mr. Winston Churchill, Mr. and Mrs. "Kid" Berg, Miss Sylvia Sidney, Mr. and Mrs. Fearnley Whittingstall, and Mr. Archie Compston. Miss Josephine Baker travelled from Paris by Air France and Sir George Maxwell came by air from Brussels; K.L.M. carried Roy Noble and his band from Holland, twelve persons with an enormous quantity of luggage and instruments. Amongst them was Mr. Wise, well known at the airport. Whilst in Holland he managed to get in quite a lot of flying, becoming a temporary member of the Rotterdam Aero Club.

Imperial Airways also booked Mr. Wallace Beery, his wife and adopted child to Paris. An official stated that he had never conversed with a film star who displayed so complete a knowledge of aviation. Wallace Beery is a private owner pilot, who gained some renown for flying Hollywood-New York over what has been described as wicked flying country. He is also an ex-officer of the American Naval Air Force.

The Sabena 4.45 p.m. departure for Ostend from Croydon, which has been a very popular service, ceased for the winter on September 11. However, it is still possible to land there on request.

Elliot, the jockey, came in by Air France to ride Thor II over the course at Doncaster. This was by way of a preliminary trial for the St. Leger. On Saturday he returned by "Golden Clipper" in time to ride in a race in France on Sunday.

An example of slipshod journalism was given by one of the evening newspapers which published a photograph of workmen, wheelbarrows and so on, under which was printed, "A busy scene at Croydon Aerodrome, where it has been found that the flying field is too small for the increasing volume of traffic." Any airport office boy could have informed the newspaper that Croydon Aerodrome is quite big enough, though hardly as level as could be desired. Actually, it was a picture of work in connection with increasing the area of tarmac.

Through the week-end winds proved boisterous, but Surrey Flying Services found that joy-flying passengers thoroughly enjoyed the bumps.

On Saturday afternoon the S.F.S. Fokker "Universal" and Percival "Gull" were kept continuously busy right up to dusk. The same afternoon the S.F.S. "Fox Moth" was chartered to Southampton to catch a boat there.

All records for passenger traffic will probably be broken during September. From September 1 to September 11, inclusive, 4,008 passengers passed through the Airport. This is 600 more passengers than during the same period last year.

It is to be observed that the conveyance of passengers to and from the Airport by road receives increasing attention. Gradually it is becoming the fashion to use

standard "de luxe" 25-seater motor coaches, luxuriously fitted and upholstered. Both Imperial Airways, Ltd., and the Royal Dutch Air Lines use such coaches, so modified that roof loading of luggage has been eliminated. I am told that in winter these vehicles will be internally heated, because passengers emerging from the warmed aeroplane cabins of to-day should not be placed in a cold road vehicle for the 30 minutes' journey to London.

A. VIATOR.

FROM HESTON

THE recording angel in the Traffic Office opened, on April 30, a new volume of his book. This register concerns only those who fly regularly and in earnest, and contains no record of trial lessons indulged in "for fun" by dabblers in the art, and it is therefore all the more remarkable that 150 pupils, each with a separate page allotted to his career, have had their names inscribed in this volume since that date.

During the month of August, twelve pupils qualified for "A" licences at the Airwork School of Flying, and of these six were women—one of the rare instances where the much-proclaimed equality of the sexes in sporting matters is confirmed by actual figures. Pupils are joining the school at the average rate of one a day.

In a day or two the British Air Navigation Company are expecting to take delivery of a Percival "Gull" fitted with the new Napier "Javelin" engine which is already building up a fine reputation in connection with this type of machine. This purchase will bring B.A.N.C.O.'s "Gull" equipment up to three machines, two "Gipsy Major" "Gulls" being already part of their fleet.

This company made two fast trips to Braemar last week for press purposes in connection with the Highland Games and the Abergeldie Castle fête.

The distance is 405 miles: this was covered in both cases in 3½ hours in a "Gipsy Major" "Gull," and the last return trip was made in seven hours. A round trip, Heston-Manchester-Liverpool-Reading-Heston, by the same company took three hours.

Mr. Stace, of Birkett Air Service, flew to Belfast, landing at the new aerodrome, for pictures of the start of the Ulster Grand Prix. He made the return journey of 320 miles in 2½ hours in a "Puss Moth," arriving on Saturday morning in time to get the pictures into the evening papers.

National calamities are the daily bread of any taxi firm, and both Banco and Birkett have had a busy week photographing the forest fires which have resulted from the drought.

Forty-five machines cleared Customs this week, among them being the Club Secretary, Miss Slade, who is ferrying her father to Rome in her "Gipsy Moth," to save him the long overland trip.

Customs Aerodromes

THE Air Ministry announces that the following aerodromes are, with the concurrence of the Commissioners of Customs and Excise, approved as Customs Aerodromes for aircraft carrying only passengers and their personal baggage:—Blackpool (Stanley Park) Airport, Bristol (Whitchurch) Airport, Cardiff (Splott) Airport, Liverpool (Speke) Airport, Portsmouth Airport.

As Customs facilities are not continuously available at the aerodromes named, prior notification that such facilities are required should be made to the aerodrome concerned. The notification should be addressed to the Aerodrome Control and should state the date and time at which facilities are required.

An Airport for Belfast

It is reported from Belfast that Midland and Scottish Air Ferries who have been operating a service from Renfrew to Aldergrove, County Antrim, for some months, have approached the Belfast Corporation with a view to obtaining a lease of the Malone aerodrome site near the city, Aldergrove being considered inconvenient, as it is 15 miles from Belfast. The Malone site was purchased

by the Corporation some years ago, when the establishment of an aerodrome was being considered, but later this scheme fell through. Recently the Belfast Harbour Board leased a part of the reclaimed land on the shores of Belfast Lough to an English company for development as an aerodrome, but as this has not yet been equipped, the Air Ministry will not permit its use for regular air passenger services.

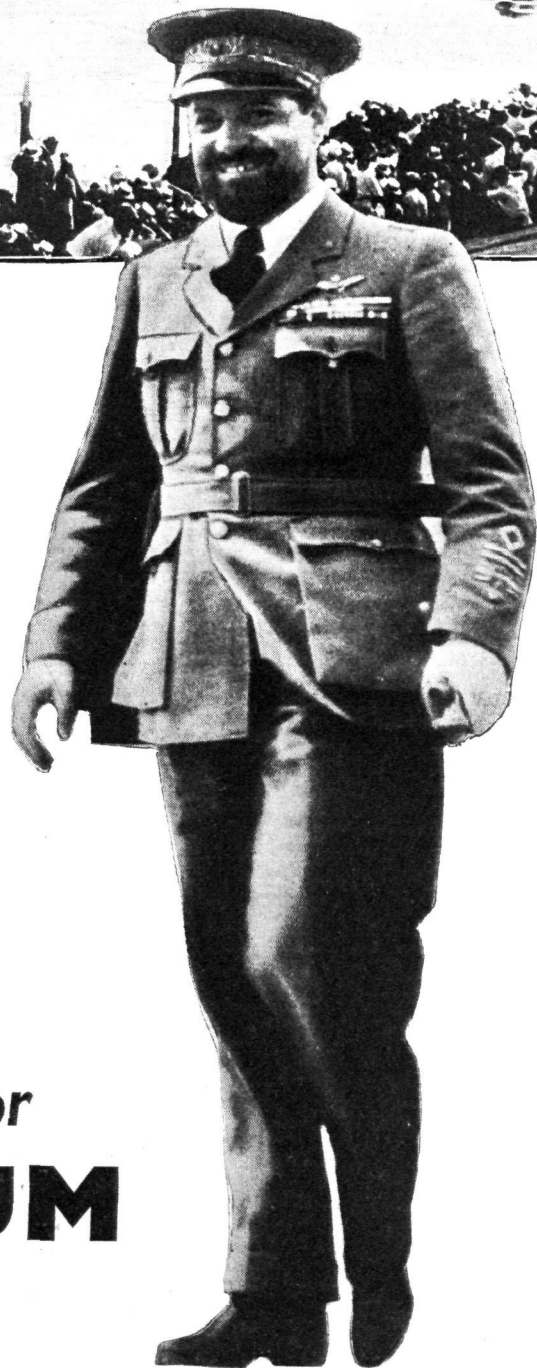
New Aerodromes in Holland

It is reported that plans are in hand for the establishment of an aerodrome at Deventer (Holland). Officials of the Ministry of Waterworks (Waterstaat) have reported favourably on the proposed site, and it is understood that financial support is already forthcoming from several quarters. It is also reported that the Royal Dutch Air Lines (K.L.M.) contemplate the establishment of a new route linking the north and south of Holland, in which case the new aerodrome would serve as a junction between this route and the existing service between Rotterdam and Enschede. A new aerodrome in the dunes between the watering places of Noordwijk and Katwijk is also being discussed.



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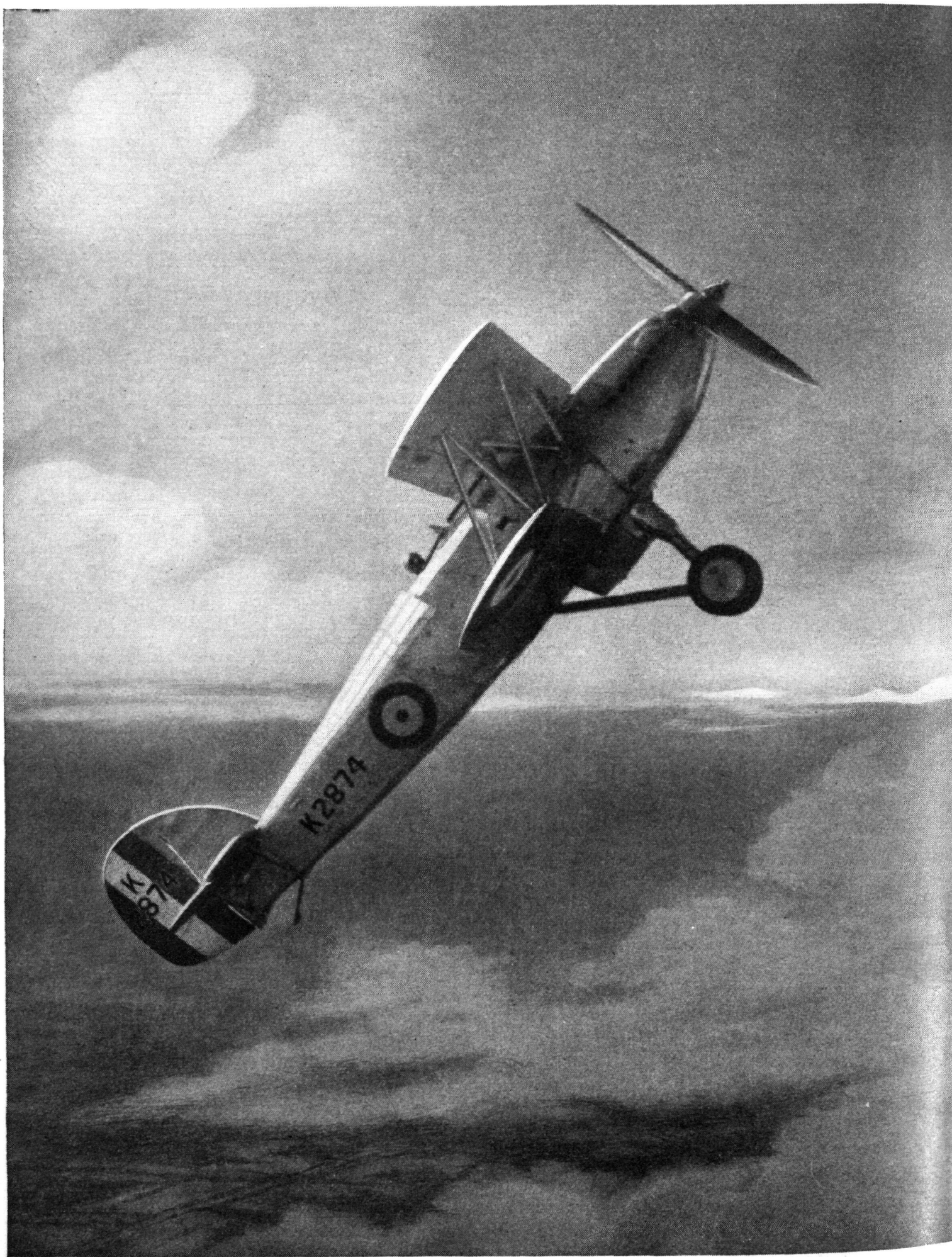


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MALAKAL AERODROME

A New Process in Runway Construction

IT is of the utmost importance that the operation of an air service should not be affected either by the heavy state of aerodromes in wet weather or by dust in the dry season, and the work which has been carried out by the Shell Company for Imperial Airways at Malakal Aerodrome in the Sudan is an interesting example of how the petroleum industry has provided the means of overcoming such disadvantages.

Malakal is on the Upper Nile about 450 miles south of Khartoum and an important aerodrome on Imperial Airways' Cairo-Cape route is situated there. It is in the heart of the marshy region of the Sud, which extends for over 600 miles from Juba (Rejaf) to Kosti, and which is the chief obstacle to the construction of a Cape to Cairo motor road. The roads in this region are impassable during the wet season, but for about four months of the year it is possible to motor from Malakal to Juba at an average speed of about 20 miles per hour.

The runway which was to be treated consisted of so-called "cotton soil," but as it would be impossible to grow cotton on it, this term is a misnomer. Cotton is grown on the black soil of the Ghezireh peninsula near the junction of the White and Blue Niles, and, because of this, any black soil is liable to be called cotton soil in the Sudan. The black colour of the Malakal soil is due to the large proportion of felspar in the sand of the Nubian desert, which is borne thence by the northerly winds in a finely-divided state, and brought to earth by the rains of the southern Sudan. It is a black clay which shrinks considerably when dry and forms lumps of extreme hardness. In the dry season cracks are formed as deep as 6 ft. and up to 12 in. wide. Several methods of treating this difficult material were tried out in the Shell Company's laboratories and at the aerodrome itself, and the following procedure was arrived at. The soil was scarified and broken into 3/5-cm. pellets by native labour, and then baked hard in kilns built with bricks made from sun-dried clay and erected outside the boundaries of the aerodrome. These baked pellets were then spread on the runway site to an

unconsolidated depth of 10 cm. and grouted with a bitumen solution; after rolling, a sealing coat was applied and the surface was blinded with more burnt soil. This gave a hard, waterproof surface fully capable of standing up to the landing shock of the 14-ton *Hannibal* class machines, and, although the consolidated thickness is only 7.5 cm. (3 in.), it should be quite capable of resisting the cutting action of tail skids of military aircraft.

Perhaps the greatest problem was the drainage of the sub-soil. This was effected in the following manner. The runway had a natural transverse fall from east to west towards the river. A trench 5 cm. wide and 60 cm. deep was dug along the entire eastern edge of the runway. This trench was filled with a mixture of bitumen and crushed soil, which formed an impervious wall on the side from which water might enter. Water running off the western side would find its way naturally into the river, and it was not considered necessary, therefore, to carry out any treatment there other than filling the cracks up to 5 yards distance from the western edge of the runway.

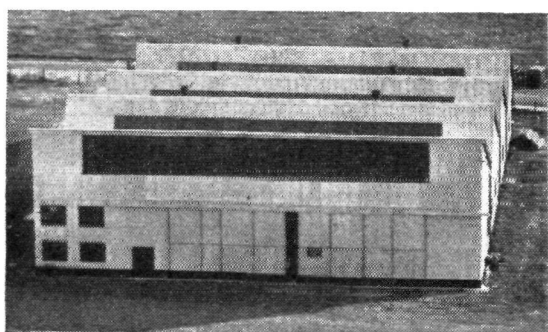
The work was carried out under the most primitive conditions, labour being obtained and retained with difficulty. Two different tribes were employed, the Shullucks and the Dinkas, the remainder of the labour being Sudanese. It was found that for screening and sifting material women were the best workers; these were fine types with an average height of 6 ft. The kilns had a particular attraction for snakes of all types, particularly cobras, as, attracted by the heat, they would crawl into them while cooling-off was taking place. No trouble, however, was experienced due to bites, as the natives unloading the kilns were very skilful with their shovels as weapons of defence.

The runway itself is 500 yd. long and 50 yd. wide, with turning circles 75 yd. in diameter at either end. The whole of the work, together with the construction of service roads by the same method, was carried out under the supervision of the Shell Company's experts, and with bitumens produced by their Suez refinery.



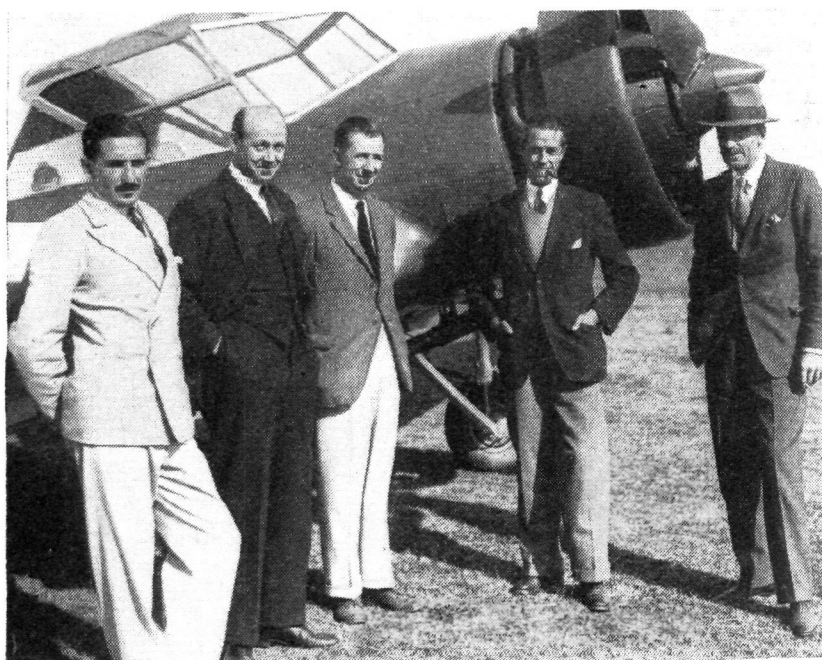
BEFORE AND AFTER: Two interesting photos showing the construction of the runway on the Malakal Aerodrome (Sudan) described above. In the top view we see natives spreading the burnt soil on the runway, and below, Imperial Airways' *Horsa* landing on the finished runway. The machine is actually touching the southern turning circle, and the reeds seen in the background are in the backwater of the Nile, which runs beside the aerodrome.





AT THE HOME OF AIRSPEED

ON September 6 the Directors of the Aircraft Exchange & Mart, Ltd., took over the first production model of the Airspeed "Courier" ("Lynx IV c") at Portsmouth Airport, the home of Airspeed, Ltd. They, Mr. B. Brady and A. L. Naish, hold the sole selling agency for England, Ireland and Wales for this machine. During the afternoon Mr. Naish gave it its first test flight. It was equipped with an engine silencer, which aroused considerable interest. Provided with seating accommodation for five passengers and the pilot, the "Courier" should, by virtue of its high cruising speed, appeal to those operators who prefer the economy of a single-engined aircraft to the complication of a multi-engined machine. The original "Courier" was built specially for Sir Alan Cobham, and has been fitted with extra fuel tanks and quick refuelling arrangements specially adapted for refuelling from the air. He



The first production Airspeed "Courier," referred to on this page, is shown in the top and bottom illustrations. The Airspeed Works at Portsmouth Airport are shown on the left, while on the right we have (from left to right) A. L. Naish and B. Brady, who hold the sole selling agency for England, Ireland and Wales for this machine, N. S. Norway, A. H. Tiltman, and Lord Granthorpe (Chairman), the Directors of Airspeed, Ltd. (FLIGHT Photo.)

is expected to start on a non-stop flight to Australia, with Sqd. Ldr. Helmore, in the near future. Sir Alan was down at Portsmouth recently practising refuelling with this machine. The latest model is now certified airworthy for an all-up weight of 3,900 lb.





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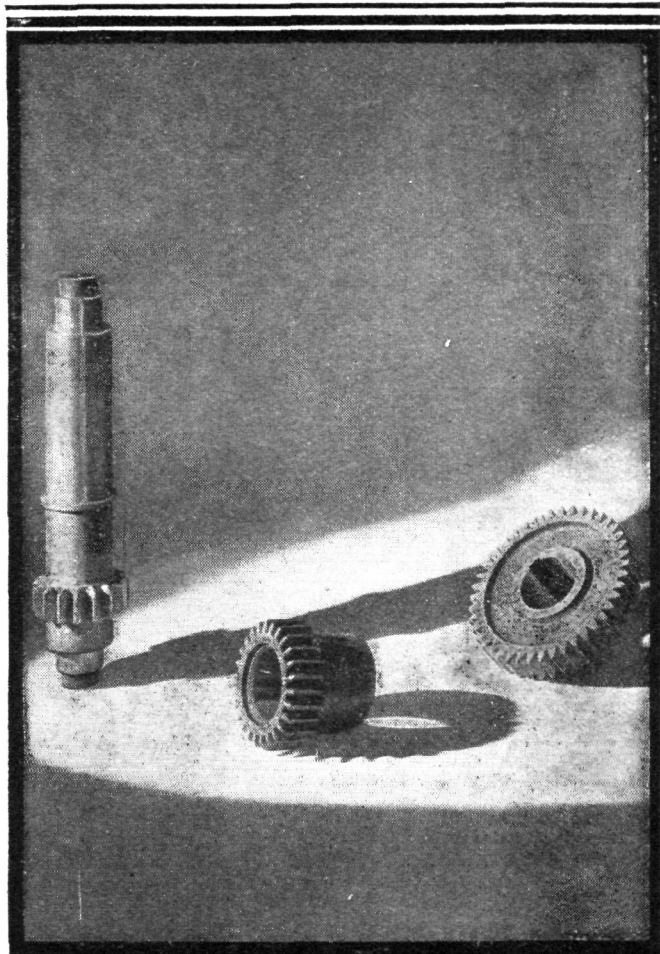
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BOOK REVIEWS

Air Annual of the British Empire, 1933-34. Edited by Sqd. Ldr. C. G. Burge, O.B.E. (Sir Isaac Pitman & Sons, Ltd.) Obtainable from FLIGHT Offices, 21s. 9d., post free.

THE fifth annual volume of the *Air Annual of the British Empire* has now appeared. The editor, we are glad to note, is still Sqd. Ldr. Burge, but the Annual is now published by Sir Isaac Pitman & Sons, and it is handsomer than ever in appearance. The paper is good, and the numerous photographs and coloured illustrations are exceptionally well reproduced.

The amount of information comprised within the volume is really surprising, and the compiling of such a work must be a great labour. In addition to the sheer information there are a number of interesting articles by eminent writers. Wing Com. E. L. Howard Williams, M.C., writes generally on "Land, Sea, and Air," urging the British Empire to be "quickly first" in air transport. Mr. Woods Humphery describes the work of Imperial Airways and explains the problems which the company had to face and the way in which they dealt with them. Maj. C. C. Turner deals with Air Line Tributaries, taking as his text "A river is made by its tributaries." It is a very suggestive article, though the Tata Air Line from Karachi to Bombay and Madras hardly seems to have received all the credit which is its due. Maj. Oliver Stewart writes on Aeronautical Training in Great Britain, doing full justice to the excellent schools and colleges which have grown up. Mr. H. J. Thomas, Chairman of the S.B.A.C., introduces the section on the Aircraft Industry, describing the difficulties which the industry has had to face, especially in the matter of export, and the success achieved in face of those difficulties. Mr. F. E. Cowlin writes on Military Aircraft.

In such a volume there must necessarily be points for criticism, and we have noted a few. In the Civil Aviation section we have not been able to get a clear idea of the doings of the year in Canada. The two pages mostly covered by statistics leave the reader without any mental picture of the year's flying in Canada. In the section on Service Aviation, the stations of the Royal Australian Air Force squadrons and other units are not given, while it is not explained that Nos. 1 and 3 Squadrons are organised much like the Cadre squadrons of the Royal Air Force, with both regular and non-regular elements. In our opinion, it would also be an improvement if the organisa-

tion of the Royal Air Force were briefly described, mentioning the Commands Air Defence of Great Britain, Inland Area, Coastal Area, etc., as well as the organisation of the Fleet Air Arm.

The sections on British aircraft and engines are complete, and the final section in French and Spanish should play their part in helping to spread the reputation of British aircraft abroad.

Aircraft Performance Testing. By S. Scott Hall, M.Sc., D.I.C., A.F.R.Ae.S., and T. H. England, D.S.C., A.F.C., R.A.F. (Ret.), A.F.R.Ae.S. Published by Sir Isaac Pitman & Sons, Ltd. Obtainable from FLIGHT Offices. Price 15s. 9d., post free.

ACCORDING to the preface, this book was written primarily for the constructor who wishes to put his aircraft through an adequate programme of tests on modern lines, but it is equally a book of interest to the student and to test pilots.

The subject of performance testing is a highly controversial one, and it is not to be expected that all test pilots will agree with everything in the book. But that is all to the good if it leads to serious discussion. The authors are particularly qualified to write on this subject, Sqd. Ldr. England having at one time been C.O. of Martlesham, and being now chief test pilot to Handley Page, Ltd., while Mr. Scott Hall is one of the Technical Officers at Martlesham. Perhaps the best way of giving in a very short space an idea of the scope of the book is to give the contents of the chapters:—Weighing, loading, c.g. determination, and airscrew calibration; test instruments; performance tests, position error determination, and measurement of r.p.m. to fly level, partial climbs, determination of best climbing speed; full climb and level speeds; take-off and landing, measurement of stalling speed and partial glides; fuel consumption tests, oil temperature tests, radiator suitability; handling tests and longitudinal stability tests; spinning and diving tests; trials for C. of A.; theory of performance reduction; the change of performance due to changes of weight and power. Performance analysis.

Complete reductions are given of the performance of two machines, one with naturally aspirated engine and one with supercharged engine. The book is one well worth studying.



"THE ACE" (THE LYRIC THEATRE)

SINCE the war plays have been produced about the Navy and Army in some profusion, some good, some bad, some merely indifferent, but producers seem to have fought strangely shy of attempting to give the public a representation of the life led by Service pilots during the war, and the atmosphere in which they worked.

"The Ace" at the Lyric, presented by Mr. Stanley Scott, strikes a new line in plays. No doubt it will be followed by others of a like nature, but it will not easily be excelled. This play is rather on the line of "Journey's End," only the setting is a German Air Force Station instead of a dug-out in the British front-line trenches. The story is simple enough. A young observer is tortured by continuous dreams, or (according to his Sergeant) persuades himself that he is tortured by continuous dreams, of a parachute that fails to open. He even funks doing a practice jump at the last moment, and, in consequence is reported to his commanding officer. Rittmeister Kurt Von Hagen, tall, thin, sharp featured, and monocled, himself the victim of fear, which he hides from his brother officers, inwardly sympathises with the young observer, and persuades him to have another attempt at doing a jump. Von Hagen has registered a vow that he will, in the long run, bring down a certain well-known English Pilot, called the "Major," who has been responsible for the death of Von Hagen's best friend "The Count." The young observer finds a sufficient reserve of courage to enable him to do his jump, but loses his head at the crucial moment and forgets to pull the rip-cord. Von Hagen is sent off on leave, but on the moment of his departure the "Major" arrives over the aerodrome, and up goes Von Hagen to do battle.

It is, of course, very easy to overdo a play of this description and thus completely spoil it, but Mr. Scott has been temperate and prudent in all things. The play is alive from beginning to end, beautifully staged, and what few faults there are in the acting will no doubt be remedied by experience. The sound effects, produced by Marconiphone Ltd., are especially worthy of note, the aero engines being very realistic, and, in the last act, Von Hagen's dash along the passage, down the stairs, across the tar-mac, and the sound of his machine taking off, extremely effective. Mr. Raymond Massey's acting in the part of Von Hagen is excellent, especially his telephone talk with the Kaiser, and his interview with a captured British airman, this latter part being taken by Mr. Franklyn Bellamy, who, incidentally, actually served in the R.F.C. during the war. "Leutnant" Hensch, apart from the fact that he looks, speaks, and acts like an Englishman, portrays quite successfully a rather hot-headed young German pilot. The only female character is a young French girl, charmingly played by Miss Ketty Gallian. The only excuse for her introduction into the play at all is that the audience may get a clearer insight into the real feelings of Von Hagen. Mr. W. Cronin Wilson, who plays the part of a one-legged officer, provides, perhaps, the most natural acting in the whole play. His remark about a new Fokker which he has just tested is typical: "No good, won't climb, too much safety nowadays." To which Von Hagen replies: "Yes, I would rather have a paper machine with a good man in it."

A very enjoyable play, which should be seen by all past and present members of our own or other flying services.

CORRESPONDENCE

The Editor does not hold himself responsible for opinions expressed by correspondents. The names and addresses of the writers, not necessarily for publication, must in all cases accompany letters intended for insertion in these columns.

A HIGH-SPEED RECORD FUND ?

[2873] We note with regret that Britain is unable, owing to the high cost, to attempt to regain the world's high-speed aircraft record.

With all respect to the Italian pilots and their machines, we maintain that our pilots and machines are superior to any in the world. Therefore we suggest that an Empire-wide appeal for funds be started to enable the R.A.F. high-speed squadron to make an attempt to regain the record.

We note in our local paper, the *Brisbane Courier*, that the cost would be in the vicinity of £200,000. Surely this amount could be raised amongst those who like to see British aircraft "on top." Lady Houston did a fine thing in financing the last attempt, and we feel sure there are others with the same fine spirit as hers.

The writers of this letter are only working men, but are willing to contribute their mite towards such a fund.

We shall be pleased to hear your readers' views on our suggestion.

c/o *Brisbane Courier*,
Queen Street,
Brisbane,
Australia.
July 23, 1933.

HAROLD F. BREMERMAN.
A. D. STEPHENS.

COMMERCIAL FLYING UNIFORMS

[2874] As explained over the telephone, your Croydon correspondent has made certain references to uniform, etc., which, although may not be intended to apply to this company, is included in the Notes in such a position as to imply reference to International Airlines.

We should like to draw attention to your correspondent's remarks in this connection, as he is apparently not aware that the uniforms of all English commercial flying firms are identical one with another—for instance, Imperial Airways, Air Taxis, Surrey Flying Services and International Airlines, Ltd.

If it is the correspondent's intention to imply that pilots of this company have been wearing their uniform "in local taverns and cinemas" we can certainly deny that this has been the case with any members of the staff of this company. It should not be overlooked, however, that this is quite a new concern, and members of the administrative staff and pilots have been on duty practically continuously since the inauguration of the Western Air Express Service.

INTERNATIONAL AIRLINES, LTD.,
S. J. NOEL-BROWN,

Croydon Airport.
September 4, 1933.

Secretary.

Edgware.
September 11, 1933.

W. E. GRAY.

BRIEFLY

CAPT. H. H. BALFOUR, M.C., M.P., has, we are informed, joined the board of directors of Titanine-Emaillite, Ltd.

ORDERS have been received for the D.H. "Leopard Moth" in such numbers that delivery could not, probably, be given until next January for an order placed now.

PRIVATE owners of aircraft are, in Germany, being encouraged by receiving a grant of about 33½ per cent. of the cost price. They will also be exempt from all landing fees and hangarage charges in their own country.

TWELVE members of the London Gliding Club are at present engaged on building sailplanes of their own.

A NEW folder issued by the Aerograph Co., Ltd., 43, Holborn Viaduct, London, E.C.1, gives full details of their latest range of spray-painting equipment.

THE week's prize (if we had one) would surely go to the pupil who, after his second solo flight, landed, spun round and came to violent stop, with one wing down. Somewhat plaintively he asked the instructor what was wrong that time. It was a new one on him, he said,

BRITISH JUSTICE v. A.N.D. 11

[2875] Following on Mr. Manning's eminently sane article in your current issue, I should like, in returning to the attack on A.N.D. 11, to draw attention to an aspect of the question that seems to have escaped notice so far.

Since the advent of that manifestation of the will of our betters, it has been impossible for a British firm or citizen to test in the air any new device without first fully disclosing its nature to the Air Ministry; A.N.D. 11 says that Ministry permission must be obtained for a flight, and their written word says that full disclosure must be made.

It is obvious that no new idea for an aeroplane can be given its final form till it has been fully tested in the air. That means that Air Ministry officials are let into commercial secrets during the development stage, by virtue of this change which they themselves have recently made in the law of the land, and that they now have opportunities of thinking out improvements on the unfinished inventions of others—improvements that would quite possibly have occurred to the experimenter during or after testing in the air.

Now, practically all new ideas are protected by patent; nor are Ministry officials precluded by their office from taking out patents—and they do so. So that it is now open to them to take quite legal advantage of the brains of others by virtue of these new powers under A.N.D. 11.

That, I make bold to say without fear of contradiction, is outrageously contrary to all our cherished ideas of British justice. Even on the Stock Exchange, that jungle where everybody is trying to gain at someone else's expense, they accept the elementary law that a man may not be a broker and a jobber at the same time. The Ministry officials simply must in any justice and common decency surrender their rights as jobbers if they wish to retain their new drastic rights of searching neutral hen roosts in the so-called public interest. But even that would not put matters quite fair and above board, for the officials might easily unwittingly give away to third parties some valuable idea; at present it seems to be generally accepted in the industry that implicit faith can not be placed in Ministry confidentiality—which is hardly surprising, considering human carelessness. So that the only sound solution seems to be to restore the old—and natural—right of the experimenter to test his idea freely in the air.

It is certainly up to the Gorell Committee to consider very carefully this state of affairs, for it quite definitely invites "graft" to a party at Adastral House—and "graft" is a thing that most Britons loathe and despise.

and he had done all he had been told to stop the swing. . . . Perhaps it was lucky for him that he did not know that half his undercarriage was hanging down during his last circuit, and that his instructor and everyone else were watching that landing with bated breath and fire-extinguishers at the "ready." It was a tribute to his instructor that the landing was as light as a feather, otherwise there would have been another sticky mess to clear up.

ALEXANDER DUCKHAM & Co., LTD., announce that Duckham's Adcol N.P.5 (Aero) Engine Oil is now the only oil recommended by the M.G. Car Co., Ltd., for all models of the M.G., both old and new. This oil is in a class by itself so far as lubricating oils for motor-cars are concerned in that it surpasses the Air Ministry Specification D.T.D.109 for use in aero engines.

NATIONAL BENZOLE MIXTURE was used by the first machine in the Isle of Wight Race, while Duckham's N.P.5 looked after the lubrication.

MR. R. C. W. ELLISON, reserve pilot to the Houston-Mount Everest flight, is now on the staff of pilots running the Portsmouth-Isle of Wight Ferry service.

THE ROYAL AIR FORCE

London Gazette, September 5, 1933
General Duties Branch

The follg. officers are granted permanent commns. in the ranks stated (Sept. 1):—

Flight Lieutenants.—John Herbert Thomas Simpson, Arthur Montague Stevens.

Flying Officers.—Alfred Guy Adnams, John Cherrill, Geoffrey Farnhill, Ronald Francis Fletcher, Christopher Edgar Hartley, Thomas Winton Hodgson, Archibald Harold Houghton, Arthur Edward Louks, Eric Charles Passmore, Maxwell Edmund Massey Perkins, Denis William Smythe, Robert Todd, George Ninian Warrington.

The following Acting Pilot Officers on probation are confirmed in rank and graded as Pilot Officers (Aug. 12):—Igor William Braye, Roy Phillip Hallowell Carew, Fernald Michael Clifford Corelli, Horace Stanley Darley, Howard Levett Fry, Alexander Fordyce Hamilton, Peter Hamilton Holmes, Charles Constantine House, Eric Bruce King, Hugh James Felce Le Good, Irwin John McGhie, Ian Alastair Scott, Alfred Thomas Hall Willis, John Wilson Young.

Pilot Officer on probation Alan Cresswell Martin is confirmed in rank (July 26). The follg. Acting Pilot Officers on probation are graded as Pilot Officers on probation (Aug. 12):—Patrick Declan Carden, Benjamin Oliver Prowse, Frank Walter Richards. The follg. Pilot Officers are promoted to rank of Flying Officer:—John Malcolm Douglas Ker (March 19); Alexander Ninian Spottiswoode (Aug. 4).

Sqdn.-Ldr. Reginald Frederick Stuart Leslie, D.S.C., D.F.C., A.F.C., is restored to full pay from half pay (July 28). Flt. Lt. William Frederick Dry is placed on half-pay list, Scale A, from Aug. 12 to Aug. 13 inclusive. (Substituted for *Gazette* Aug. 15.)

Air Vice-Marshal Amyas Eden Borton, C.B., C.M.G., D.S.O., A.F.C., is placed on retired list (Aug. 23). Group Captain George Ivan Carmichael, D.S.O., A.F.C., is placed on retired list at his own request (Sept. 1). Wing Comdr. Frederick Charles Victor Laws, O.B.E., is placed on retired list at his own request (Sept. 1). Flt.-Lt. Reginald John Drummond Drummond is placed on retired list on account of ill-health (Sept. 6). Flt.-Lt. Robert

Duncanson is transferred to the Reserve, Class A (Aug. 31). F/O. Roderick John Torrington Barrett is transferred to Reserve, Class C (Aug. 28). F/O. Norman Wallis Mackenzie resigns his short service commn. (June 19).

Memorandum

The permission granted to Capt. Vivian Stranders to retain his rank is withdrawn (Aug. 12).

ROYAL AIR FORCE RESERVE RESERVE OF AIR FORCE OFFICERS

General Duties Branch

The follg. are transferred from Class A to Class C:—Sept. 1.—Sqdn. Ldr. Harold James Payn, A.F.C.; Flt. Lt. Robert Hugh McCoubrie Sheppard, Sept. 2.—F/O. James Stibbs Napper, D.C.M.

The follg. Flying Officers relinquish their commns. on completion of service: Llewellyn Oliver Moss, M.M. (July 21); Albert Francis Fleetwood-Lawton (July 30); Frank Malcolm Brownlee (Aug. 4); Edward George Olson (Sept. 4). F/O. Francis Joseph Edward Feeny, D.S.O., relinquishes his commn. on completion of service and is permitted to retain rank of Squadron Leader (July 29). F/O. John Bridges Harvey (Lt. R.A.R.O.) resigns his commn. (Aug. 4).

Medical Branch

Flt. Lt. Jeremiah Twohill, M.B., is transferred from Class D(ii) to Class D(i) (July 13).

SPECIAL RESERVE

General Duties Branch

The follg. Pilot Officers on probation are confirmed in rank:—July 8.—Thomas Hughes Clarke, Frank Holman, Dudley George Lewis, July 18.—Henry Morrison Magrath, Henry Cecil Raphael.

Pilot Officer on probation Hopton Fownes Hamilton relinquishes his commn. on account of ill-health (Aug. 23).

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Group Captains: T. E. B. Howe, A.F.C., to H.Q., Fighting Area, Uxbridge, 1.9.33, on appointment as Officer-in-Charge Administration, vice G/Capt. G. I. Carmichael, D.S.O., A.F.C. E. R. Manning, D.S.O., M.C., to Station H.Q., Manston, 1.9.33, to Command, vice G/Capt. S. W. Smith, O.B.E.

Squadron Leaders: C. Crawford, to Special Duty List, 1.9.33, whilst employed at Royal Arsenal, Woolwich, vice W/Cdr. C. H. Keith. H. A. Whistler, D.S.O., D.F.C., to H.Q., Fighting Area, 1.9.33, for Air Staff duties, vice W/Cdr. R. P. Wilcock.

Flight Lieutenants: B. B. Caswell, to No. 800 (F.F.) Sqdn., 28.8.33. R. E. Hall, to No. 27 (B) Sqdn., Kohat, India, 2.8.33. F. H. Whitmore, M.B.E., D.S.C., to R.A.F. Base, Calshot, 30.8.33. W. F. Dry, to Air Ministry, Dept. of Chief of the Air Staff (D.O.S.D.), 1.9.33. C. H. Johnson, to H.Q., Coastal Area, Lee-on-the-Solent, 1.9.33. H. J. G. E. Proud, to Station H.Q., Bircham Newton, 1.9.33. R. A. T. Stowell, to R.A.F. College, Cranwell, 1.9.33. J. F.

Titmas, to No. 7 (B) Sqdn., Worthy Down, 1.9.33. C. F. Toogood, to Home Aircraft Depot, Henlow, 1.9.33.

Flying Officers: E. J. P. Davy, to No. 57 (B) Sqdn., Upper Heyford, 15.8.33. A. W. M. Finny, to R.A.F. Base, Gosport, 29.8.33. J. A. Dixon, to R.A.F. Base, Gosport, 1.9.33. J. W. Homer, to Air Armament School, Eastchurch, 1.9.33. H. L. McCulloch, to Station Flight, Duxford, 1.9.33. P. R. May, to No. 3 Flying Training School, Grantham, 1.9.33. H. M. Pearson, to R.A.F. College, Cranwell, 1.9.33. H. V. Satterly to R.A.F. College, Cranwell, 1.9.33.

Pilot Officer A. C. Martin, to No. 35 (B) Sqdn., Bircham Newton, 26.8.33. **Acting Pilot Officers:** I. W. Braye, to No. 12 (B) Sqdn., Andover, 26.8.33. P. C. Carden, to No. 35 (B) Sqdn., Bircham Newton, 26.8.33. C. C. House, to No. 33 (B) Sqdn., Bicester, 26.8.33. R. H. Young, to No. 14 (B) Sqdn., Amman, 15.8.33.

Accountant Branch

Flying Officer C. G. Stowell, to No. 2 (A.C.) Sqdn., Manston, 27.8.33.

Transfer of Officers to the Reserve

The undermentioned short service, medium service and non-permanent officers should note that they become due for transfer to the reserve, on completing their period of service on the active list, in the period February—March, 1934.

Flight Lieutenants.—H. W. Taylor, A. L. R. Duke, C. Feather, and N. A. West.

Flying Officers.—M. V. de Satge, R. E. H. Beaton, G. H. A. Blackwood, A. F. C. Booth, R. A. Davies, *C. S. Gill, T. W. Hoyle, G. P. Longfield, V. R. Moon, G. E. Mustard, H. D. Primrose, G. N. Roberts, H. Legh Smith, T. H. Wilson, J. D. Baker-Carr, D. R. C. Barrois de Sarigny, B. J. Hurren, H. R. Lowry, H. S. Martin, H. E. Mayes, J. S. D. Miles, C. V. Ogden, G. J. Pawson, C. M. Rees, H. A. Shotter, E. A. H. Tanner, A. J. Tunnard, and A. C. P. Westhorpe.

MEDICAL BRANCH

Flight Lieutenants.—H. R. Clein, M.B., B.Ch.

DENTAL BRANCH

Flight Lieutenants.—M. J. Pigott, B.D.S., and A. P. Atkins, L.D.S. Statements from Flight Lieutenants Clein, Pigott and Atkins, indicating whether or not they desire to be considered for an extension of service to five years on the active list are to be forwarded forthwith.

Arrangements are to be made for the officer marked “*,” who has been selected provisionally for a permanent commission, to be examined at the Central Medical Establishment during October, 1933, as to his physical fitness for such commission.

Vacancies for Apprentice Clerks, Royal Air Force

The Air Ministry announces: Vacancies exist in the Royal Air Force for well-educated boys (in possession of an approved first school certificate between the ages of 15½ and 17 to enter as apprentice clerks in October and January next. Entry will be by selection from among applicants with the necessary education qualifications.

Detailed information regarding the apprentice clerk scheme can be obtained from the Secretary, Air Ministry (Apprentice Clerks' Department), Gwydyr House, Whitehall, London, S.W.1. Successful candidates will be required to complete twelve years' regular Air Force service after reaching the age of 18. At the age of 30 they will normally return to civil life, but a limited number may, subject to service requirements, be permitted to re-engage to complete twenty-four years' service qualifying for pension.

Boys entered under this scheme will be trained up to the age of 18 (or the completion thereafter of the prescribed course) in clerical duties, type-



writing, practical office routine, shorthand (for Clerks, General Duties), pay and store accounting (for Clerks, Accounting). During this period their general education will be continued under a staff of graduate teachers.

An apprentice clerk at present receives pay at the rate of 1s. a day for the first year and 1s. 6d. a day afterwards, *i.e.*, until he has both attained the age of 18 and successfully completed the course. Thereafter pay is at present issuable at rates commencing at from 3s. to 4s. 6d. a day (21s. to 31s. 6d. a week) according to the degree of success achieved at the final examination. In addition, free board and lodgings and an allowance for uniform are provided.

Flight Cadetships for Aircraft Apprentices—The “Lord Wakefield” Scholarship Awards

THE Air Ministry announces: Aircraft Apprentices A. J. Mason, J. D. Melvin, J. W. Bayley and F. E. Croce from No. 1 School of Technical Training (Apprentices), Halton, have been selected for cadetships at the Royal Air Force College, Cranwell, on the result of the examinations held on completion of their three years' training as aircraft apprentices.

The “Lord Wakefield” Scholarships valued at £75 each have been awarded to Flight Cadet T. M. Buchanan (on the result of the recent competitive examination for entry into the Royal Air Force College) and to Flight Cadet A. J. Mason.

Nomenclature of Aircraft—“Baffin” and “Perth”

THE official name of the Ripon aeroplane with Pegasus engine is “Baffin.” This name is to be used in all correspondence and reports relating to this type.

The “Iris VI” boat seaplane has been renamed “Perth.” This name is to be used in all correspondence and reports relating to this type.

Formation of No. 3 Coast Defence Training Flight, Gosport

No. 3 Coast Defence Training Flight will be formed at Gosport, with effect from August 21, 1933.

Permanent Commissions for Short Service Officers (Medical Branch)

THE undermentioned medical officers have been selected for permanent commissions, subject to physical fitness:—

Flight Lieutenants—

Glen Albyn Martin Knight, M.B., B.S.
Owen Stephen Morris Williams, M.R.C.S., L.R.C.P.

Flying Officers—

John Foster Dales, M.R.C.S., L.R.C.P.
James Frederick Sandow, M.R.C.S., L.R.C.P.

AIR POST STAMPS

By DOUGLAS ARMSTRONG

(Editor of "Stamp Collecting")

Another British Air Stamp

The official inauguration of a new air service linking London with Plymouth on August 25, under the ægis of International Air Line, Ltd., has given rise to a second semi-official air post stamp, albeit of a somewhat unpretentious character. It consists of a small yellow label bearing the printed inscription "I.A.L. Western Air Express—3d.—Prepaid Package," enclosed in a rectangular frame formed of small dots, and in black throughout. This, however, is understood to be merely an emergency issue, and there is reason to believe that a more elaborate form of air post vignette will follow at an early date.

Only a limited number of letters was carried on the first flight from Plymouth to London, owing to the short notice given, and these were further impressed with an oval cachet containing the words "International Air Lines, Ltd.—Plymouth," with the date "25 Aug. 1933" in a single line across the centre, also in black.

Additional issues are foreshadowed in connection with the projected air services to the Isle of Man and other points in the British Isles, and collectors of first flight covers should be on the *qui vive* for announcements of inaugural dates.

Balbo Flight Stamps

The various air mail stamps associated with the recent Italian seaplane flight to America and back have been in keen demand during the last few weeks. Undoubtedly the most popular is the Newfoundland \$4.50 provisional unused, examples of which have been selling at all sorts of prices from 25s. to 35s. apiece. It seems probable that it may settle down at something like the latter figure, although by comparison with the Do-X variety it should be worth, eventually, from 40s. to 50s. Flown covers have changed hands at as much as 70s. each, but the extent of the available supply does not yet seem to be known. It is reported that of the 8,000 copies surcharged not more than 200 remained in the hands of the postal authorities at St. John's for final disposal to the highest bidder on August 15.

The scarcest stamps issued on this occasion were the special printing of the Italian triptych series in modified colours and distinguished by the overprint "Servizio di Stato" for exclusive use upon official communications despatched by Gen. Balbo's squadron. Only 1,500 copies of the two values are stated to have been printed, and as they were not on sale to the public, their very existence remained unknown until after the flight had taken place.

Monaco Joins the Ranks

The Rivieran principality of Monaco is the latest country to provide a distinctive stamp for use upon aerial correspondence. Of the same face value as the existing French issue, it has been extemporised by overprinting a small aeroplane device and surcharging the new denomination upon some remainders of the pictorial 5 francs postage stamp of the series 1924-26 bearing a view of the old port and printed in green and carmine. In due course this emergency air stamp will give place to one of definitive design.

So far as is known, there is at present no airport at Monaco, so that air mail letters must be forwarded to the nearest point on the French air system.

New York—Haiti Flight

To celebrate the completion of a non-stop flight by U.S. aviators from New York to Port-au-Prince, the capital of the Black Republic of Haiti, on July 18, some 5,000 copies of the contemporary 20 centimes postage stamp of that country, showing a map of that country, were overprinted in red with a tiny figure of an aeroplane in the clouds surmounting the inscription "Columbia—Vol Direct—N.Y.—P. au P.—Boyd-Lyon—60 cts." and sold as souvenirs of the occasion. Whether or not they were actually used for air post purposes, however, is not clear.

Air Stamp Prices

Spectacular advances in the quotations for rare air mail stamps are recorded in the new edition of the "Standard" Postage Stamp Catalogue (Whitfield, King & Co.) just published. These are particularly notable in the case of the Newfoundland varieties, where we find the "Hawker"

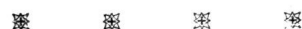
air mail stamp of 1919, priced at £500 unused and £250 used, closely followed by the "De Pinedo" issue at £450 unused and £60 used. The figures are a trifle optimistic when compared with Gibbons' estimate of the present-day values of the "Hawker," which are £350 unused and £220 used, and having regard to the fact that a mint "Hawker" was sold in auction last season for just under £200, the latter quotations would appear to be nearer the mark. The Gibbons' Catalogue does not price the "De Pinedo" unused, but values the flown variety at £80, as last year. On the other hand, the first Colombia air mail stamp, which has been in keen demand during the past year, is valued by Gibbons at £200 unused, compared with Whitfield, King's price of £120.

Generally speaking, all air post stamps show appreciation in the latest editions of the stamp catalogues, with the exception of certain overrated South and Central American issues, such as Mexico and Costa Rica. Despite the prevailing depression, the air stamp market remains firm, with the supply of better class varieties well below the supply.



Marconi's New Home

DURING the week-end, Friday, September 1, to Monday, September 4, Marconi's Wireless Telegraph Co. moved from Marconi House, Strand, where the company has been for the last 21 years, to the newly-built Electra House on the Victoria Embankment. In this new building Marconi's will occupy the fifth, sixth, and seventh storeys, which have a total floor area of nearly 50,000 sq. ft. Marchese Marconi himself will occupy a capacious room in the front of the sixth floor. On the seventh floor will be a permanent display of historical Marconi apparatus, which has been specially arranged for display in the company's new offices. Every room is provided with a clock synchronised from a master clock placed on the lower ground floor. Another interesting feature of this new building is two artesian wells bored to a depth of 550 ft., which provide an independent water supply of 9,000 gall. a day.



PUBLICATIONS RECEIVED

Aircraft Performance Testing. By S. Scott Hall and T. H. England. London: Sir Isaac Pitman and Sons, Ltd. Price 15s. net.
Aeronautical Research Committee Reports and Memoranda No. 1491. *Experiments on Swept-back and Swept-forward Aerofoils.* By D. H. Williams and A. S. Halliday. Oct., 1930. Price 1s. 3d. net. No. 1527. *Binary Servo-Rudder Flutter.* By W. J. Duncan and A. R. Collar. Feb., 1933. Price 1s. 3d. net. No. 1532. *The Best Basis of Aircraft Performance Reduction Part I. Supercharged Engines.* By J. L. Hutchinson and E. Finn. Part II. *Unsupercharged Engines.* By E. Finn. Sept., 1932. Price 2s. 3d. net. London: H.M. Stationery Office, W.C.2.
Session 1933-34 of the Department of Aeronautics. Imperial College of Science and Technology, South Kensington, London, S.W.7.



NEW COMPANIES REGISTERED

AIR TRANSPORT ASSOCIATION, LTD.—A company limited by guarantee and not having a capital, with 100 members, each liable for £1 in the event of winding up. The objects are to promote, support and protect commercial aviation (which expression includes owners, users, charterers and operators of all types of aircraft for all purposes). The management is vested in a Council, the first members of which are not named. Solicitors: W. H. Court & Son, 7, Grosvenor Street, W.1.
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AERONAUTICAL PATENT SPECIFICATIONS

Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motor.
(The numbers in brackets are those under which the Specification will be printed and abridged, etc.)

APPLIED FOR IN 1931

Published September 14, 1933

31,573. D. S. DE LAUVAUD. Propellers. (397,158.)

APPLIED FOR IN 1932

Published September 14, 1933

1,403. J. S. BARCLAY. Radial engines. (397,163.)

1,799. D. F. LUCKING. Height indicators, particularly for use when landing. (397,166.)

4,430. W. C. PITZER. Flying machines, etc. (397,120.)

33,112. J. LETOURNEUR. Captive balloons. (397,347.)

34,541. P. CARRE. Rotary i.c. engines. (397,352.)

APPLIED FOR IN 1933

Published September 14, 1933

5,144. C. ZEISS. Apparatus for plotting maps from photographs taken from aircraft. (397,189.)

Personals

PREPAID

(18 words or less 3/6, then 2d. per word).

To be Married.

GUILFOYLE : CHILD.—A marriage has been arranged, and will take place shortly, between **GROUP CAPTAIN W. J. GUILFOYLE, O.B.E., M.C.,** Royal Air Force, and **MRS. ELSPETH CHILD,** of Windygates, Fleet, Hants, widow of the late **W. N. Child, M.R.C.S., L.R.C.P.**

Married.

CANDY : GOING.—On Sept. 2, 1933, at St. Martin-in-the-Fields, **JOHN GEOFFREY SADLER CANDY, R.A.F.,** eldest son of Mr. and Mrs. J. A. S. Candy, of East Kingston, near Littlehampton, to **EILEEN MARCELLA,** elder daughter of R. M. Going, M.B., F.R.C.S., and Mrs. Going, of Tonbridge.

KNIGHTS-WHITTOE : WOODFULL-MILLARD.—On Sept. 5, 1933, at Christ Church, Lancaster Gate, W., **PILOT OFFICER RONALD JOHN KNIGHTS-WHITTOE, R.A.F.,** son of Mr. and Mrs. D. Knights-Whittoe, of Cranwell Lodge, St. Albans, Hertfordshire, to **MISS MARGARET JACINTH WOODFULL-MILLARD,** only daughter of Capt. and Mrs. S. WOODFULL-MILLARD, of 51, Cleveland Square, Hyde Park.

SCHOLTO-DOUGLAS : DENNY.—On Sept. 7, 1933, at Chelsea Register Office, **GROUP CAPTAIN W. SCHOLTO-DOUGLAS, M.C., D.F.C., R.A.F.,** to **MISS JOAN LESLIE DENNY,** only daughter of Col. H. C. Denny, C.B., and Mrs. Denny, 17, The Avenue, Colchester.

Births.

ANSON.—On Sunday, Sept. 3, 1933, at 17, Coulson Street, Chelsea, to **IRENE** wife of **FLIGHT-LIEUT. H. A. ANSON, R.A.F. (retired).**—the gift of a daughter.

SENDER.—On Sept. 5, 1933, at 29, Cleveland Gardens, London, W. 2, to **BARBARA (née Bowman),** wife of **DOUGLAS SENDER, R.A.F.**—a son.

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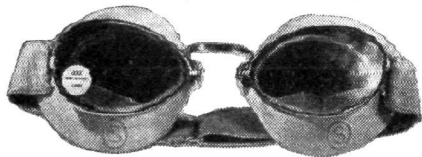
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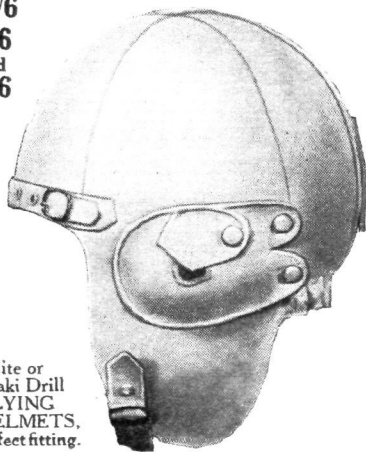
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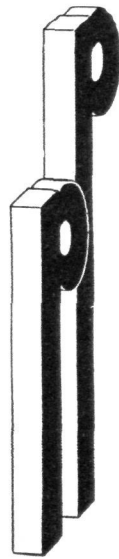
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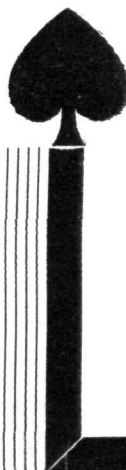
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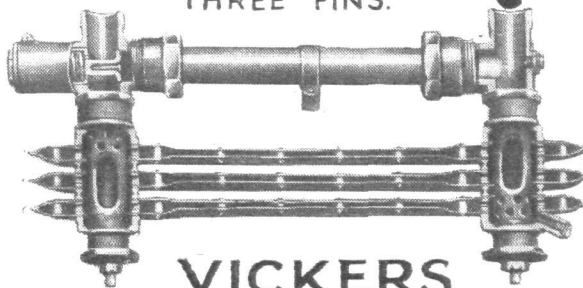
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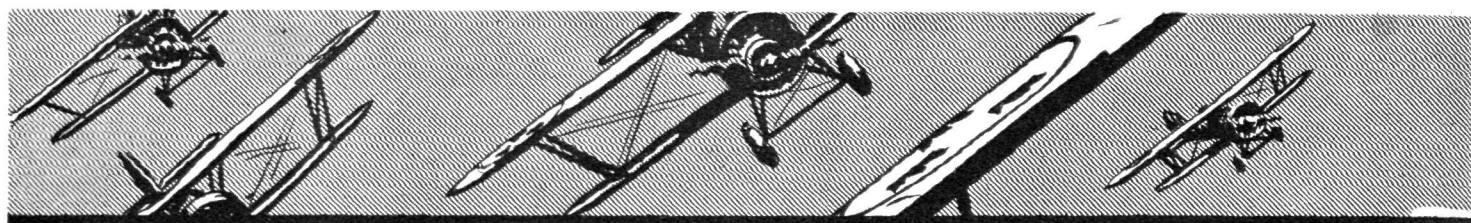
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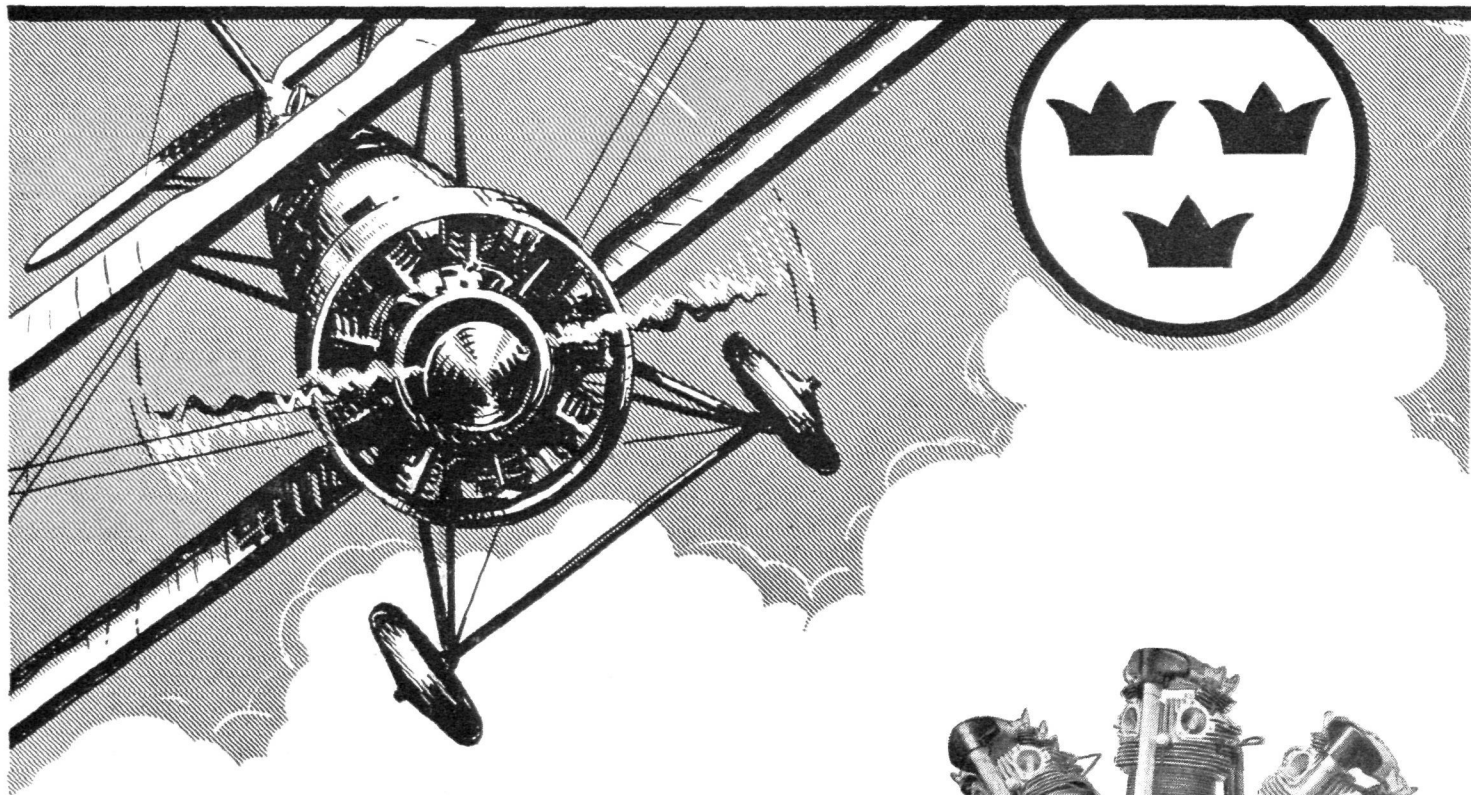
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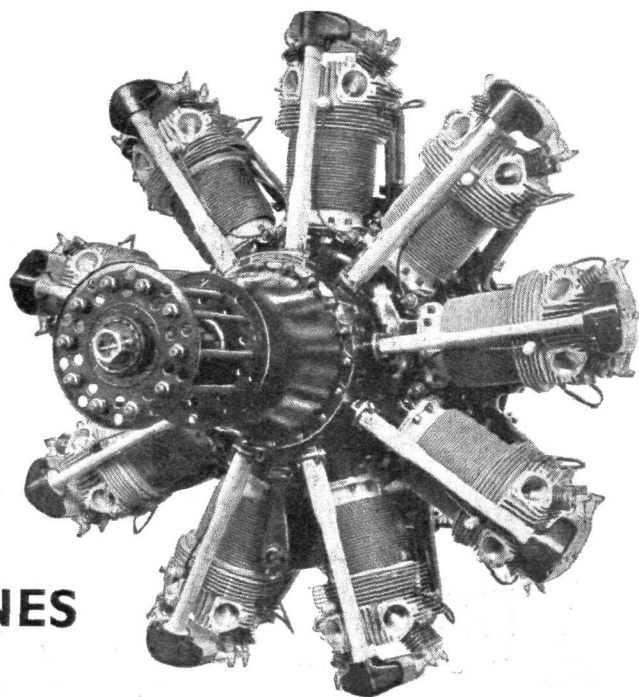


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